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The Joyous Christmas Tide

By WILLIAM H. OSMER.

A GAIN the Christmas bells ring out the old, old story—the story of that night when shepherds, watching o'er their flocks on Syrian plains, beheld the Star in the East, and bowed and worshiped.

Yes, the Christmas bells again ring out, and, in their mystic tremor tell the world that another anniversary of the birth of the Christ-child is upon us.

As the gleaming Star shines brightly from depths of eternal splendor, the world, lulled by sacred visions, stops to pause and contemplate.

Inspired by touching tones of Christmas bells, the Spartan mothers of Christendom bend over cots of sleeping loved ones, emblematic of the story of that other mother, brooding o'er the blessed form that pressed the manger-cradle; and in the echo of the Christmas bells mother-hands fill the little stockings and light the candles on the spreading tree, to loom in dazzling bewilderment in the wonder-world of Christmas morning.

In the chorus of the Christmas bells old loves draw nearer, and the newer ones fill the circle, as if to mellow the harsh asperities mirrored by the absence of the dear ones who long ago paid the inexorable debt which no fate can overthrow.

The sound of the Christmas bells awakens in memory the happenings of the dear old days that are gone; never to return, and which we would not have back again, if we could, but the vision is as fair and the memory as green as the mistletoe and holly that festoon the casement, the lintel, and the frames that grace the old-time, faded portraits of those "gone home." Viewing these pathetic shadows, in tenderness and tears, we pity them. Ah, what an error! Let us hope they pity us, as exiles far from Home, for—

"Ever near us, though unseen,
Their dear immortal spirits tread."

Further reflecting, in childlike appeal, we murmur in our hearts:

"But oh, for the touch of a vanished hand,
And the sound of a voice that is still."

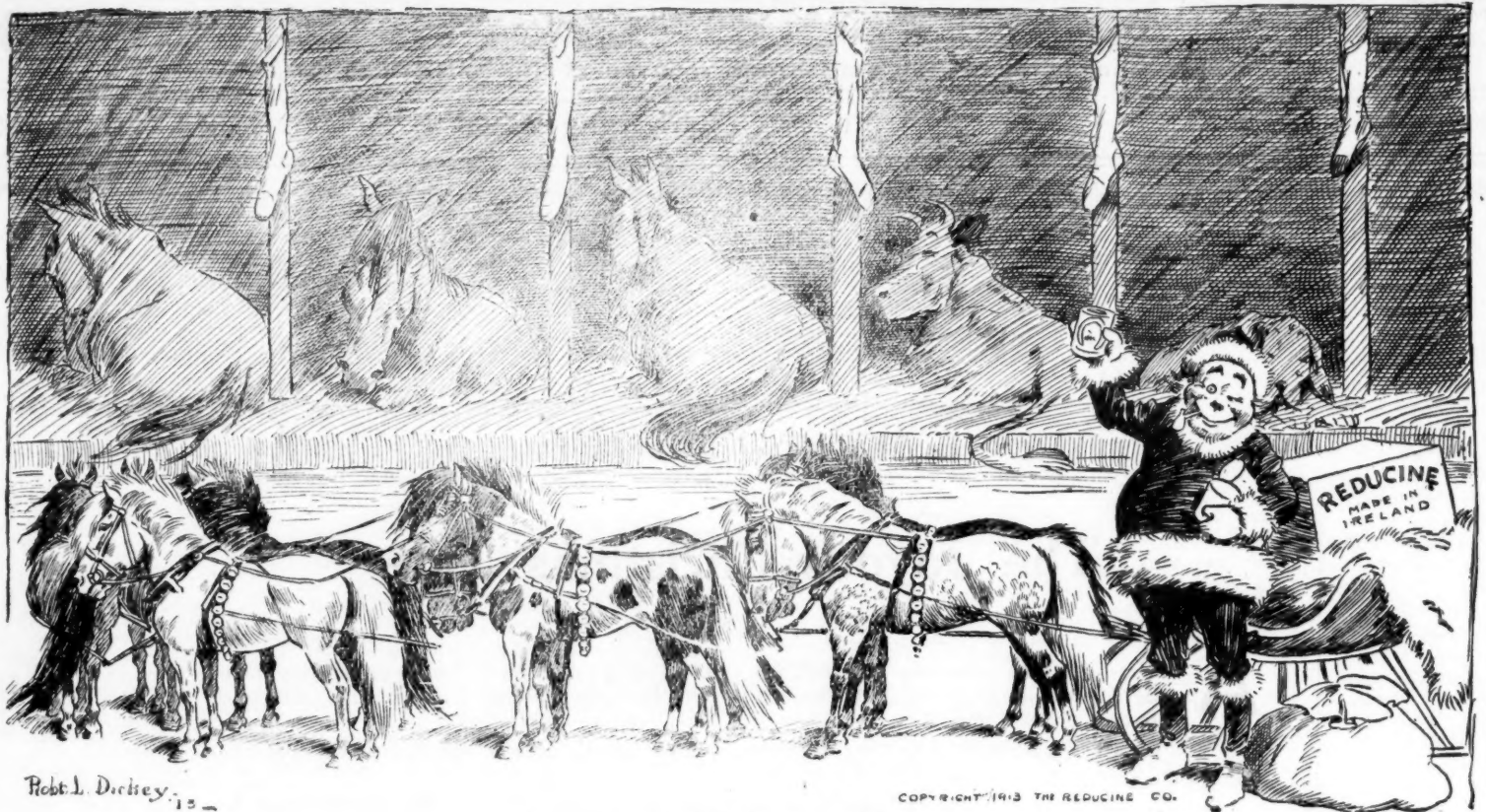
On this natal day of the lowly Nazarene, may the sweet cadence of the Christmas bells, as it floats on the tranquil stillness of the winter air, mingled with the solemn intonations of organ and choir, bring joy and happiness to the hearts and homes of all, and, in the true spirit of the Master's mission, may good will, kindness and charity pervade the whole fabric of humanity.

In our acts and deeds let us have a patient consideration for those less fortunate than ourselves, remembering that kindly tokens and thoughtful gifts, properly bestowed, though of little importance to the giver, perhaps, are treasured with a cheer and gladness that bring a compensating pleasure in return.

In hope, in prayer and in duty, let us strive to have the wealth, the plenty and the joy of Christendom so generally and generously diffused that poverty may forget its sting, and the pitiless scroll, upon which care, avarice and ambition write their prolix lineaments, shattered upon the altar of Christian destiny.

REDUCINE

THE HUMANE TREATMENT FOR LAME,
SORE, WORN AND BLEMISHED HORSES



Robert A. Dickey, 15

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"'Twas The Night Before Christmas."

Here are a few of the many things REDUCINE will do.

REDUCINE will prevent navel infection in every case—if it is applied to the navel immediately after birth. Thousands of foals die every year from navel infection—others survive and are stunted—have enlarged knees—swollen stifles, etc.

REDUCINE will cure any case of Fistula of the Withers or of Poll Evil unless the case has been mistreated by the use of powerful caustics or acids which have caused disease of the bones of the withers or the poll.

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REDUCINE will cure practically all cases of lameness in the foot.

REDUCINE will grow a new, sound, tough, elastic hoof on any horse in from ten to seventeen weeks, unless the horse has been "nerved."

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REDUCINE will cure any case of SPRUNG or BOWED TENDON, and the leg will be left clean and smooth, and the horse will race as sound as he did before the injury occurred.

REDUCINE will cure any case of SCRATCHES, MUD FEVER, CHRONIC CRACKED HEELS, MALLENDERS or SALLENDERS with one single application.

REDUCINE will cure SORE NECK or SORE BACK with one single application. SIDE BONE cannot be cured, but if treated as directed in our FREE BOOKLET the horse can be made to

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REDUCINE will remove any Shoe Boil (see directions in our FREE BOOKLET).

REDUCINE will cure any ordinary case of BIG KNEE.

REDUCINE will cure any case of CAPPED HOCK.

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REDUCINE will cure nearly every sort of old, indolent sore or ulcer.

REDUCINE will cure the lameness caused by RING BONE (see our FREE BOOKLET).

REDUCINE WILL NOT CURE GENUINE BONE SPAVIN, for the very good and sufficient reason that NO REAL BONE SPAVIN HAS ever been cured since Adam named the original horse in the Garden of Eden, by any method of treatment. Our FREE BOOKLET gives our test for BONE SPAVIN. This test we originated and we have used it without a failure for nearly forty years. Test your horse as directed in our FREE BOOKLET. If he passes this test he has NO BONE SPAVIN—No matter how big a bunch he may have where a BONE SPAVIN comes. If he does not pass this test don't waste your money for REDUCINE or for any other treatment.

REDUCINE will cure SWEENEY or any other ordinary injury to shoulder, hip or stifle.

REDUCINE will cure any unnatural enlargement, no matter where located.

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REDUCINE

is kept in stock by leading druggists and horse goods dealers in every important town throughout the United States and in Every Part of Canada. The Retail Trade is supplied by the following wholesale firms, each of which buys of us in case lots and always has Reducine on hand. If your dealer does not carry Reducine, he can get it for you at once from either of the following wholesalers. Show him this list. Your retail dealer will furnish you Reducine at \$4.00 per can.

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Coffin Redington Co.....	San Francisco
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N. B. Danforth.....	Wilmington
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Churchill Drug Co.....	Cedar Rapids
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C. E. Potts Drug Co.....	Wichita
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Becker & Durki.....	Louisville
Robinson-Pettit Co.....	Louisville
LOUISIANA.	
Findaly-Dicks & Co.....	New Orleans
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Farrand, Williams & Clark.....	Detroit
Hazeltine & Perkins Co.....	Grand Rapids

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C. D. Smith Drug Co.....	St. Joseph
Hall Drug Co.....	Springfield
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Newbro Drug Co.....	Butte
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Montana Drug Co.....	Butte
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Lincoln Drug Co.....	Lincoln
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C. M. Moseman & Bro.....	128 Chambers St., New York
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Texas Drug Co.....	Dallas
The J. W. Crowder Drug Co.....	Dallas
Greiner-Kelly Drug Co.....	Dallas
San Antonio Drug Co.....	San Antonio
H. W. Williams & Co.....	Fort Worth
E. R. Roach Drug Co.....	Amarillo
Southern Drug Co.....	Houston
Houston Drug Co.....	Houston
Kelly & Pollard.....	El Paso
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Riter Bros. Drug Co.....	Logan
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Zion's Co-operative Mer. Co.....	Salt Lake City
Ogden Wholesale Drug Co.....	Ogden
VERMONT.	
Burlington Drug Co.....	Burlington
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Owens & Minor Drug Co.....	Richmond
The Bodeker Drug Co.....	Richmond
WASHINGTON.	
Stewart & Holmes Drug Co.....	Seattle
Spokane Drug Co.....	Spokane
WEST VIRGINIA.	
Ohio Valley Drug Co.....	Wheeling
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F. Dohmer Co.....	Milwaukee
Milwaukee Drug Co.....	Milwaukee
Spence-McCord Drug Co.....	La Crosse
PORTO RICO.	
J. Leavitt.....	San Juan
MEXICO.	
W. G. Robinson.....	Avenida Jurez No. 46, City of Mexico

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GREAT BRITAIN AND IRELAND —The Reducine Co., 38 S. Frederick St., Dublin, Ireland, and by Chemists throughout the British Isles.	
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AUSTRALIA —Rocke, Tompsett & Co., 292 to 298 Flinders St., Melbourne.	
AUSTRIA —Armin Berger, Kaiser Josefstrasse, 36, Vienna.	
CANADA —C. A. Burns, Toronto; Lyman, Ltd., St. Paul St., Montreal; and National Drug & Chemical Co., of Canada, and all its branches.	
CHANNEL ISLANDS —Le Rossignol & Roissier, 7-9 Esplanade, Jersey.	
FRANCE —Roberts & Co., Rue de la Paix, 5, Paris.	
GERMANY —J. G. Henze, Preussauer Street, 35, Berlin.	
INDIA —Eroom & Co., 168 Dharamtala St., Calcutta; E. F. Flower & Co., Lahore, all branches of Army and Navy Co-operative Society, Ltd.	
ITALY —H. Roberts & Co., 17, Via Tournabuoni, Florence.	
JAPAN —Mollinson & Co., No. 48, Yokohama.	
JAVA —Soesmans, E. V. & C., Kantoor.	
NEW ZEALAND —Trist & Small, Cashel Street, Christchurch.	
RUSSIA —V. L. Waldberg, Nikolajevskaja 84, St. Petersburg.	
SWEDEN —Vasens, Apoteket, Droghandel "Vitrum," Stockholm; H. KJELLSTROM, Apoteket, Stromsholm.	
SWITZERLAND —Bucher, Lehr & Cie, Minatelwerk, Luzern (Lucerne).	

TAKE NOTICE

We can send Reducine by Parcel Post only when the amount of postage on two pounds for each can is sent in addition to \$4.00 and 5c. added for insurance. Your postmaster will inform you of the amount required from New York to your postal zone.

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PRICE \$4.00 PER CAN

THE REDUCINE COMPANY, 4181 Broadway, New York City

ST. LOUIS NATIONAL STOCK YARDS.

There will be no open market at the St. Louis National Stock Yards on Christmas Day. All stock arriving that day, however, will be yarded, watered and fed the same as usual.

C. H. Dulaney, a well known hipper from Grace, Miss., was on Monday's market with a car of cattle, consigned to Blakely-Sanders-Mann.

E. E. Collins of Memphis, Tenn., had a load of cattle on Monday's market. They were sold by Milton-Marshall Live Stock Commission Co.

A. E. and Glen Gowan of Morrisonville, Ill., had a load of cattle Monday, including yearlings at \$7.15, consigned to Stewart, Son & McCormack.

H. W. Newschager of Shelby County, Mo., had several cars of hogs to Hess Commission Co. last week, satisfactory prices being received for them.

L. C. Mills, of Modesta, Mo., had a car of steers on the market Monday that were sold by Woodson & Fennwald Commission Co., at \$8.05 per hundred.

C. S. De Field, East Prairie, Mo., was on Monday's market with two loads of cattle that sold satisfactorily by Woodson & Fennwald Commission Company.

Thomas Karcher, of Sheridan County, Mo., was on Monday's market with a load of steers and hogs, consigned to Milton-Marshall Live Stock Commission Co.

A. A. Erwin, of Queen City, Mo., had two loads of steers on the National Stock Yards market Monday, consigned to Woodson & Fennwald Commission Co.

J. F. Burrell of Macoupin County, Ill., had two cars of hogs on Monday's market. They were handled through the agency of Blakely-Sanders-Mann Commission Co.

J. C. Gilbreath, a big Colorado shipper, was represented on the market last week with a shipment of 1,040 lambs that were sold by Moody Commission Co. at the top of the market.

W. H. Dorris, of Mississippi County, Ark., was on market Monday with a shipment of mixed cattle. They were sold by Blakely-Sanders-Mann Live Stock Commission Co.

W. T. Hodge of Centralia, Mo., was on the market with a load of choice yearlings and heifers that sold at satisfactory prices by Woodson & Fennwald Commission Co.

John F. Jordan of Fisk, Mo., was on Monday's market with a shipment of 159 hogs, that were sold at \$7.00 and \$7.60 per hundred by Blakely-Sanders-Mann Commission Co.

P. L. Lyda, of Atlanta, Mo., was on the market Monday with a shipment of 74 hogs that averaged 179 pounds and were sold by Moody at \$7.75, a good price considering the weight.

D. C. Steckdaub, a prominent feeder of Boone County, Mo., was on the market Monday with two cars of cattle. They were sold at satisfactory prices by the National Live Stock Commission Co.

Star & Afflick of Boone County, Mo., were represented on Monday's market with 139 head of lambs, averaging 70 pounds. They were sold by Moody Commission Co. at \$8.00 per hundred.

L. L. and Fred Leiner of Randolph County, Ill., were represented on Monday's market with a shipment of hogs and cows, consigned to Blakely-Sanders-Mann Live Stock Commission Co. There were three fine Holstein milkers that sold at \$100 each and hogs at \$7.75. Mr. Fred Leiner, who

accompanied the shipment, expressed himself as well pleased.

T. A. Erskine, of Runnels, Iowa, was again represented on last week's market with three cars of hogs to Hess Commission Co., which should have proved money-makers, according to the way they sold.

Foster & Hudson, of Callaway County, Mo., were represented on the National Stock Yards market Monday with a light load of hogs, consigned to Moody Commission Co., and were sold at satisfactory prices.

J. T. Rigsby, who has been a regular patron of this market for the past 25 years, was on market Monday with a load of good medium hogs that topped all the Western markets for that day, selling at \$7.87½.

R. R. Ratton & Son, connected with the Newark Lumber Company of Newark, Ark., had a load of hogs to Hess Commission Co., which was sold at very satisfactory prices, according to a letter received from Mr. Ratton.

J. Frank Miller, of Macon County, Mo., had a car of very fine quality steers, heifers and cows on Monday's market, that were sold at very satisfactory prices by Blakely-Sanders-Mann Commission Co.

J. E. English of Martintville, Mo., was on the market Monday with a shipment of 14 steers and heifers that brought \$8.50 per hundred. They were sold by Woodson & Fennwald Live Stock Commission Co.

A. F. Meyer, of Callaway County, Mo., was on the market last week with 10 head of 842-pound cattle, that sold at \$9.25 for Christmas trade by the National Live Stock Commission Co. Mr. Meyer is not a big feeder, but a good one.

J. M. Cash, of Pike County, Mo., was on the National Stock Yards market Monday with a shipment of three cars of hogs of his own feeding, averaging 206 pounds, that sold for \$7.85. He was represented by Nally-Wells Commission Co.

A. Herrington, of Green City, Mo., one of the most prosperous shippers to this market, had a shipment of 87 hogs, averaging 219 pounds on Monday's market that brought \$7.85. The Moody Commission Co. handled the sale for Mr. Herrington.

Cook & Lawless, Adams County, Ill., had four cars of hogs to the Hess Commission Co. last week. They also had a 12-car shipment to the same company week before last, establishing a new record for this for any hog shipper to this market.

H. P. Johnson, a big shipper of Fulton County, Kentucky, was on the market Monday with a load of hogs and cattle. The hogs were good enough to bring \$7.85 per hundred. The shipment was handled through the agency of the National Live Stock Commission Co.

A. M. Hewitt of Palmer, Ill., was on the market Monday with a consignment of 39 steers, that were sold by Stewart, Son & McCormack at \$7.85. He also had two cows that brought \$7.50. Mr. Hewitt is a prominent stockman and feeder, and accompanied this shipment.

A. B. Hensley, of Montgomery Co., Mo., had a shipment of 22 steers on the market that sold for \$10.00 per hundred. They were sold by the National Live Stock Commission Co. to Joe Stern of New York. These are the highest priced steers sold on this market this year for holiday trade. Mr. Hensley is a good, substantial feeder.

COL. WAY RETURNS TO TEXAS.

Col. W. T. Way, who for over forty years has been affiliated with the St. Louis National Stock Yards, has left St. Louis and returned to Texas. His headquarters will be in San Antonio. His friends, in wishing him all manners of good fortune in the far South, presented him with a handsomely engraved desk set, the presentation speech being made by Mr. A. L. Keechler, and was responded to very feelingly by Col. Way.

NOTRE DAME'S FEEDING METHODS.

Brother Leo, steward of Notre Dame University, is a master feeder and this year he presented to the beef making of the country something akin to a novelty. He finished his International winners cattle and did it to perfection on a summer ration in which silage was a principal ingredient. They never had their feet on grass.

Brother Leo has a theory, and it looks logical, that grazing cattle on high-priced corn belt land is not economical. He argues that under cultivation the land required to graze a steer during the summer will produce enough feed to support several cattle, hence he keeps his fattening cattle in confinement, silage taking the place of grass during the grazing season.

Brother Leo is an exponent of the tram system of farming in contradistinction to the muscle method. When he took the management of the huge farm attached to Notre Dame University, it was a liability rather than an asset, but by modern methods he has greatly increased its cropping capacity. Liberal use of crushed lime stone and rock phosphate, coupled with animal manure, has accomplished this. He has made clover grow where a stand could not be secured previously, has installed alfalfa and actually produced, in the season of 1912, a crop of 128½ bushels of corn on land that did not exceed 30 bushels the year before. The fame of Notre Dame farm is attaining the same proportions as that of the educational institution of the same name.

In this respect Brother Leo's cattle in the car lot show presented an educational exhibit worth studying, especially by those who are striving to reduce cost of making beef.—Hereford Journal.

PRICE OF SILAGE IN SILO.

In determining the number of tons of silage contained in a silo, the area of the base is multiplied by the altitude or depth. This will give the number of cubic feet of silage. It is generally figured that a cubic foot of silage weighs 40 pounds. For example, a silo 16 feet in diameter and containing 30 feet of silage would contain 120 tons.

A fair price for silage in the silo is \$3.50 per ton. In feeding cattle at the Pennsylvania station this amount is allowed for silage. With the present high price of corn and other green feeds \$4 per ton is not too high, especially where the corn is fairly well matured when put in the silo.—W. H. Tomhave in an exchange.

SILAGE AS A CHEAP FEED.

That silage, when fed with corn or some other grain that is high in protein, is one of the best, as well as the cheapest roughage for beef cattle, is the opinion of John L. Tormey of the College of Agriculture of the University of Wisconsin. The high prices of feed stuffs and the necessity for fattening cattle at the lowest possible price have been predominating factors in making silage a popular feed for beef cattle. Mr. Toomey has found by experience and experiment that silage is useful for "stocking" cattle over the winter, as well as for fattening purposes.

As men make new discoveries to meet new economic conditions, so when all kinds of food stuffs advanced in price, did the stockmen begin to look around for a feed that would lower the cost of feeding cattle for the market. They found the solution of this problem in silage, for after a series of tests made by experiment stations and by the stockmen themselves, it was found that when silage was mixed with a

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ration that it considerably lowered the cost of grains. Just as silage for a long time has been considered necessary for profitable dairying, so it is now beginning to be considered as a necessity for the economic production of beef both on the farms of the Middle West and on the ranches of the West and Southwest.

There is no crop which will produce feed so cheaply as corn. It was proven by experiment at the Vermont station that corn fodder reduced to silage is worth 1.26 times as much as when the stalks and the ears were fed separately. The benefit or value that is derived from ensiling corn more than pays for the additional labor. The losses of feeding material are less when the corn is ensiled than when it is left in shocks in the field.

"Silage should not be made the sole feed for stock," says Mr. Tormey, "because a balanced ration is needed and something must be fed with the silage that is rich in those substances in which silage is deficient."

STOCK RAISING IN SCOTLAND.

A correspondent in Chicago Dairy Produce says: In Scotland during the winter months the stock is fed warm feeds. They start feeding their cows at 4:30 in the morning in some places. They have a peculiar method of feeding their cows. For instance, here is the ration fed by one prominent dairyman:

Two pounds oat straw per cow at 5 a. m.; 20 pounds cut turnips at 6:30 a. m.; 5 pounds meal per cow (in full milk) at 8 a. m.; 20 pounds cut turnips per cow at 11:30 a. m.; 2 pounds straw per cow at 12 m.; 5 pounds meal per cow at 5:30 p. m.; which gives a large flow of milk, with 2 pounds of special cake; 6 pounds straw at 6 p. m. Salt is added to the feeds, and the cows are turned out once a day, in most cases, for water and exercise. Some believe in watering them twice each day.

Others do not pursue these extreme methods, but feed three times per day. The principal feeds, however, outside of the concentrates, are oat straw and turnips. When cows are on grass they generally are fed a little grain (one pound of bran and one pound of crushed oats) twice a day, especially when grass gets short. By wetting their feeds they get the cows to consume a large quantity of water.

Fertilizers are used quite extensively on the soil. In addition to this, the Scotch farmer keeps two and one-half animals per cultivated acre of land, while the English farmer keeps two. The Scotchmen raise twice as many sheep as the Englishmen. England excels in the number of hogs and horses. The number of heads of stock kept per acre largely accounts for the excellent crop yield.

The great State of Illinois, I believe, keeps at the rate of seven-tenths of an animal per cultivated acre of ground, or less than one-third of the amount kept in Scotland.

If land in Scotland were farmed as a great deal of ours is, I do not think it would be worth more than \$10 per acre.

In the northern part of Scotland most stockmen buy the largest part of their feeders in Ireland, and after they are fattened sell them as Scottish beef, which brings the highest price of any beef in the English market. In this bleak and rugged country, with its moor and glens, have been produced three or four of our leading breeds of cattle, in addition to their famous Clyde horses.

Weekly Market Report

Cattle Slow; Hogs Firmer and Slightly Higher—Sheep Steady.

Receipts Monday — Cattle, 4,800 head; hogs, 15,000; sheep, 2,000; horses and mules, 2,150.

CATTLE—Offerings of beef steers light and included very few good steers and practically nothing on the choice to prime order. The market was uneven. There were spots where sellers complained that the market was slow and the feeling weak. On the other hand the bulk of sales looked steady and in places sellers reported strong prices. It was a good, steady market on the bulk of transactions. There was a slim proportion of steers above the \$8 line, although the best of the day's offerings went in a range of \$8@8.25. The big end of the showing, which was of medium grade, went at \$7@7.75, and a few loads of common steers downward of \$7.

A very irregular market on cows and heifers. The supply was small, but even at that it was enough to satisfy the demand. There was only an indifferent demand from local butchers and this lack of support was plainly evident in the feeling of the market. Strictly good quality heifers, of which there was only a small supply, got a fair call and sold steady to strong, but even on these kinds there were some slow, weak spots reported. The bulk of the heifers were a good 10@15c lower than last week and some were hard to place even at the loss. The top for straight loads was \$8.50 and bulk sold at \$6@7.90.

Cows were in moderate supply, but the demand was rather weak and market was slow. Prices on best cows were about steady, but medium kinds sold from steady to a dime lower. Cannors and cutters were on a steady to dime lower basis. Bulls showed little change.

Feeder and stocker prices were about steady, though the market was slow and rather dull in places. Bulk of the feeding steers went in a range of \$6@6.75, and stockers at \$5.50 upward. There was a right fair demand for she stuff, particularly stock heifers, and prices showed little change in the disposal. Yearlings also got a fair demand from stockers and sold steady.

There was a fair offering of Oklahoma steers, but the bulk of the showing was out of canner territory. There was a good demand for what steers were offered and they found fairly early disposal at steady prices. The top was on a couple of loads of handy-weight steers that went at \$7.30, and bulk sold at \$6.25@6.65. A load of Louisiana steers brought \$6 and odd lots of Mississippi steers went as high as \$7. The trade in grown canners was on a steady to shade lower basis. Yearlings and heretics sold \$5@10c lower, with a top on canner yearlings of \$4.35 and bulk at \$4.15@4.20.

HOGS—Good grade hogs with weight were scarce, while the house was filled with pigs and lights and the greater proportion not very good, as they were from the Southern territory. The demand was quite fair and the market opened on a good 5c higher basis for all desirable hogs, but the light shippers were not any better than steady and pigs were generally considered 25c lower and some of the little ones were 30@40c lower. The top was \$7.87½ and the bulk of the desirable hogs went at \$7.55@

7.80, which showed to be better than on Saturday.

The best demand came from shippers and city butchers for the good grade hogs around 200 pounds and over, and it was these kinds that sold readily and at the best prices. Most of them brought \$7.75 and better, while the mixed and pramer grades went to packers at \$7.40@7.70, and the throw-out rough hogs at \$7.35@7.50. Packers were not overly active in their operations on the early market and not so very brisk later, but they finally succeeded in getting a right good number of hogs.

Some of the very best, native lights and pigs found sale at prices that were not much lower, but in a general way the pigs trade showed a loss of 25c and the small Southern ones as much as 40c. The market closed with many pigs still unsold and most of them had not received a bid. Best lights under 165 pounds sold at \$7.40@7.60, fair grades at \$7.15@7.35, best pigs under 125 pounds at \$7.20@7.40, fair grades at \$7@7.15 and the low kinds at \$6.75 and lower.

SHEEP—In a general way sheep sold on a steady basis and the lambs around 25c higher.

City butchers purchased some of the Mexican lambs at \$8, which was the top of the market, while the rest of them went to the packers at \$7.90. The best of the Colorado lambs sold at \$7.35 and the others at \$7.15. The lambs from Colorado were not strictly good and fat. Native lambs sold \$5.50@7.75 if good and others at \$5.50@7.00.

Most of the mutton sheep went to slaughterers at 4.65, if good, and others at \$4.50, with a few that were not very good at \$4.25. Stockers that were good and choppers found sale at \$3.50@4.00, plain grades \$2.50@3.35 and the bucks \$4.

HORSES AND MULES.

HORSES—Total offerings of horses and mules 2,150 head, which was larger than expected. A better trade than was expected was in evidence, as there was a good showing of buyers from both the Eastern and Southern sections. The South was especially well represented and there was a good demand from this section. They were on the market for the good quality kinds of toppy Southern animals and were taking a supply at good prices. The Eastern demand was fairly good and no complaints were made as to the trade from this section. There was a goodly attendance of the Atlantic seaboard states' buyers and they were calling for a few well-built drafters and some sound chunks.

Heavy draft, extra.....\$210@250
Heavy draft, good to choice. 175@200
Eastern chunks, ex. quality. 160@200
Eastern chunks, plain..... 100@135
Southern horses, ex. quality. 125@150
Southern horses, plain..... 50@75
Choice drivers, with speed. 175@275
Saddlers..... 150@250
Plugs 5@20

MULES—There was a fairly good demand for any kind of good cotton mule, but the quality kinds showed their distinction best. There was a very light demand for other kinds of mules, and, as usual, there was only a light supply of miners, pitters and big mules disposed of. There is a very light call for good, big mules at present, and these kinds are not meeting with the very best of satisfaction.

16 to 16½ hands.....\$160@280
15 to 15½ hands..... 100@225
14 to 14½ hands..... 60@140
12 to 13½ hands..... 50@120
Plugs 20@70

OUR COUNTRY.

The geographical extent of United States territory can be better understood by the statement that the distance between New York City and San Francisco, by the most direct route, is 3,302 miles. By a direct line from Cape Cod to the Pacific, at the corresponding latitude, the distance is 2,800 miles, while the breadth of our country, from the Gulf of Mexico to the Canadian boundary, is 1,600 miles. These figures apply only to the main body of our territory. Attou Island, the most western land of the United States, is almost as far west of San Francisco as New York is east. The saying that the sun never sets on the British Empire may be applied, with equal truth, to the United States, for, when it is 6 p. m. on Attou Island, Alaska, it is 9:36 a. m. of the next day on the eastern coast of Maine. Attou Island is at 193 degrees and Eastport, Me., 67 degrees west longitude from Greenwich. The most eastern point of the United States is Quoddy Head, Me.; the most northern is Point Barrow, Alaska; the most western, Attou Island, and the most southern, Key West, Fla. Working from these four points it will surprise the examiner as to the geographical center of the United States. It is located in the vicinity of the crossing of 55 degrees north latitude and longitude 110 degrees west from Greenwich; about 520 miles north of the northern boundary of Montana.

George H. Gross, 17 years old, of Desplaines, Ill., the champion boy corn producer of Cook County, has been awarded the championship of Illinois. He produced 113 bushels from one acre.

400,000 Settlers a Year

Immigration figures show that the population of Canada increased during 1913 by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in Manitoba, Saskatchewan and Alberta.

Lord William Percy, an English Noblemen says:

"The possibilities and opportunities offered by the Canadian West are so infinitely greater than those which exist in England, that it seems absurd to think that people should be impeded from coming to the country where they can most easily and certainly improve their position."

New districts are being opened up, which will make accessible a great number of homesteads in districts especially adapted to mixed farming and grain raising. For illustrated literature and reduced railway rates apply to Superintendent of Immigration, Ottawa, Canada, or to the Canadian Government Agent.

G. A. Cook, 125 W. 9th St., Kansas City, Mo.
G. J. Broughton, 112 W. Adams St., Chicago, Ill.

160 ACRE FARMS IN WESTERN CANADA FREE

COOK YOUR FEED AND SAVE

Half the Cost—with the **PROFIT FARM BOILER**

With Dumping Chaldron. Empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also makes Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Chaldrons, etc. Send for particulars and ask for circulars U. S. Sperry & Co., Batavia, Ill.

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WABASH

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General Passenger Agent,
ST. LOUIS.

IN THE POULTRY YARD

A BUSINESS POULTRY PLAN.

Editor RURAL WORLD: Pen No. 1 of the May hatched brown leghorn pullets laid 51 eggs in the past 14 days. Pen No. 2 laid 28 eggs in the same number of days. Pen No. 3 came in to laying on Nov. 29th and have laid six eggs in the past nine days.

We have these fowls so warmly and comfortably housed that cold, stormy weather will not interfere with their laying. We have them mated with the best young male birds of their kind on the place and are saving their eggs with which to start an incubator as soon as the number of eggs are obtained. The eggs are taken from the nests daily and placed on the floor of the incubator cellar, which is walled up with cement, concrete and tile, drained so that in a wet time, if seep water enters it will flow out, and during the daytime if we want to spray the inside with water, to supply moisture to the hatching machines, the surplus water will pass out. This is a deep cellar; it has seven steps down to the floor, which is of solid concrete. It is equal to a natural cave in the earth. The temperature will register about 60 per cent and it will not vary with the outside changes. We are in a measure independent of the changes of weather with our laying stock and the hatching machinery. Now the next step is to make preparations to handle the offspring, and I am pretty well prepared for that. My intention is to run three 100-egg capacity incubators, placing the eggs for the first seven days in the very best machine I have. I want it not to vary one-tenth of a degree during the time it cares for the eggs. This is the most critical time with the whole process of incubation. This machine will be adjusted to run on 102 degrees. Then we move the eggs to machine No. 2, which will be adjusted to run at 103 degrees. This machine ought not to vary one-half of a degree during the seven days it has charge of the eggs. Only of course when we cool the eggs down. It will run low for a while. This is nature's way. Don't run the lamp flame up, to hurry the temperature back to 103. Let it rise gradually. No. 3 machine has a chick tray and will care for the eggs during the last seven days and do all the hatching.

Now when we get the "ball rolling" along nicely, we will take off a hatch every seven days, care for the chicks until they are broiler size, which is 1½ pounds. Then the March and April broilers will sell for 62½ cents each, or \$7.50 a dozen, and we have a shipment every seven days.

The pathway of the broiler chicken raiser is not all "sunshine," and the inexperienced will do well to go slow in it. I have raised broiler chicks that January 1st hatching sold for \$8.25 a dozen in April, but they weighed around two pounds each or better.

E. W. GEER.
Farmington, Mo.

Powdered charcoal is a most effective disinfectant, and the fact that fowls will pick up many pieces of it is evidence that they enjoy it and that it supplies a want in their system.

The poultry business is yet in its infancy and offers a good living for those who take it up as a business, carefully looking into the conditions, such as breeds, markets, location, etc.



POULTRY PRIZES.

The following Missourians were awarded prizes for their exhibits at the recent show of the Arkansas State Poultry Association at Rogers, viz:

Mrs. C. H. Clouston, St. Louis, Mo., first on cock, hen and cockerel Golden Laced Wyandottes; first and second on single comb Rhode Island Red pullet and hen.

W. W. Henderson, Bridgeton, Mo., first on Barred Plymouth Rock cock and hen; first and second on pullet-bred Barred Rock cock, cockerel and hen.

E. W. Grove, Clayton, Mo., first and second on single-comb White Leghorn cock, hen, pullet, and first on cockerel.

J. H. Fisher, Jackson, Mo., first on White Orpington cock, cockerel, pullet and hen.

THE KANSAS TURKEY CROP.

The finest crop of grasshopper-fed turkeys that Northwestern Kansas ever had is ready for the harvest, and, incidentally, the "seed" crop of grasshoppers is correspondingly small.

Last summer, when the showers were few and the grasshoppers thick, the turkey came to the front and did valiant work in slaughtering the insect pest. The weather was ideal for the turkeys and they thrived, and the farmer who was fortunate enough to have a flock of from 25 to 150 turkeys won in the turkey vs. grasshopper eating contest.

The worst enemy to the young turkey is too much rain. With weather conditions just right, Western Kansas probably has a record crop of turkeys. The milk-fed chicken is an imitation, say the experts, and the residents of that section claim to come nearer to the ideal wild flavor with their annual Thanksgiving and Christmas offering than any other state in the Union.

One object in early hatching is to have pullets reasonably well matured before severe cold weather sets in.

The hen that keeps herself busy scratching will always prove to be a layer. Industry and egg production are inseparable with hens.

Feed early and late and let them get hungry—that is, have regular intervals between meals; the practice of keeping fowls by them all the time promotes an excess of fat.

All houses and nests should be clean for best results. Fight lice all the year around. There are some essentials in poultry that must be attended to. This is one of them.

Scabby legs is a contagious disease caused by the work of an imperceptible parasite which deposits a formation of rough scales on the legs. Any kind of grease frequently applied will cause it to disappear. A very good remedy is to mix equal parts of kerosene with lard and use as an ointment.

COST OF RAISING COCHIN AND LEGHORN PULLETS.

To get at the relative cost of a grown pullet, reared under ordinary farm conditions, we give the New York experiment, in which an accurate record of the cost of production was kept from egg to marketable size of the young birds. The items pertaining to cost of eggs for hatching, the food for the sitting hens, and the food for the growing chicks were all considered. To begin with, 100 Leghorn and 100 Cochin eggs were incubated under hens. Naturally the Cochins had to be hatched earlier in the season; this gave the Leghorns an advantage, as their eggs were stronger in fertility and the season more favorable than when the Cochins were incubated. Sixty-five per cent of the Cochin eggs stood the final test for fertility, while over 85 per cent of the Leghorn eggs passed. Out of these the Cochins hatched 78 per cent, while the Leghorns brought out 92 per cent. Thus the Cochin eggs netted about 46 per cent of strong, healthy chicks, while the Leghorn eggs netted 75 per cent. Counting grocery price for eggs, and food for the sitting hens at market price, the Leghorn chicks cost 40 per cent less than those from the Cochins after hatching. Part of this difference in cost could, of course, be attributed to the difference in time of hatching. Had incubators been used instead of hens, the records might have been slightly in favor of the Cochins.

The sexes were separated when the Cochins were 15.5 weeks and the Leghorns 12 weeks old, both kinds at that time having attained about the same stage of maturity. At this time the Cochin cockerels weighed about 4.5 pounds each, and the pullets about 3.6 pounds. The Leghorn cockerels weighed 2.1, and the pullets 1.7 pounds per head. The food cost for the increase in weight was 14 per cent less for the Cochins than for the Leghorns. The food cost for the Leghorn pullets, after the sexes had been separated, for a period of three and a half months, was 35 per cent less per fowl than for the Cochins. Note that now we say per fowl, not per pound. The cockerels of both breeds were marketed by the pound. Deducting the market price of the cockerels from the cost of growing all the chicks to the time they were separated, and continuing the pullets on to laying age, gave a 20 per cent greater net cost for the Leghorns than for the Cochins. The larger Cochin cockerels brought the Cochin average cost down. By this method of figuring the cost of rearing the Cochin pullets to laying age was on the average about 15 cents each. This does not include labor nor the cost of housing.

It would seem, then, considering that fully half of each season's crop of chicks may safely be expected to be cockerels, to be sold on the market at from two to four months of age, that it costs less to stock an egg farm with the large breeds of hens than with Leghorns. We have still farther to consider that these hens are to be eventually sold at the age of two years as old hens; at this time the larger breeds will weigh from seven to nine pounds when fat, while the Leghorns will not weigh over five pounds, and many of them not over three and a half pounds.

The experiment was carried farther with these flocks of hens to deter-

mine the relative value of whole grain and ground grain for egg producing, but no attempt was made to show which of the two breeds made the best egg record or cost the least to keep during the egg-laying period. This point ought to have been demonstrated. We should like to see the same experiment carried out comparing the American class of fowls with Leghorns and Cochins. So many farmers are continually changing breeds and back again—thus keeping their flocks in a state of mongrelism—because they cannot make up their minds which breed is the best paying investment. For this reason experiments of a practical nature along this line would be invaluable.

POULTRY NOTES.

Put carbolic acid in the whitewash. Old eggs often produce weak chicks.

Sand and gravel help the gizzard to chew up the food.

More than one-half of early maturity is in high feeding.

The feeding of sour or moldy food often causes bowel diseases.

There is profit in raising chickens when they are properly handled.

The best time to wash eggs, if needed, is when they are gathered.

To get eggs from a hen, she must be in the proper condition of flesh.

Darkened nests will do much towards preventing the egg eating habit.

The duck is an enormous eater and requires more bulky food than chickens.

It is not always safe to purchase old exhibition fowls for breeding purposes.

Poultry wire tacked over a shallow box makes a good feeder for bran or a dry mash.

It is not long grass, but that which is short, fresh and crisp that delights and benefits fowls.

Roosting too early or roosting on perches that are too narrow often causes crooked breast bones.

Hens over two years old are seldom good layers, and unless good as breeders should be disposed of.

While a yellow-skinned fowl is no better than a white-skinned one for the stable, the former usually sells the quickest and best.

For the first meal a hard-boiled egg mixed with dry bread crumbs is best. Stale bread soaked in milk and squeezed dry is good.

Some varieties stand confinement better than others. Consider this when choosing a breed if you must keep them closely yarded.

With eggs for hatching, endeavor to pick out the smooth, medium sized, well shaped eggs and from hens or pullets that are well matured.

Sell off the scrub chickens and have only one breed. This is especially so with the beginner. One breed at a time and perfect that.

Turkeys are light eaters on the whole, and are constantly growing until one year old, and it costs no more to raise a good turkey than it does a little one.



BARRED P. ROCKS

200 fine ones; \$1.00 each for cockerels or pullets. Also M. B. Turkeys.

MRS. H. C. TAYLOR,
Roanoke, Mo.

GLEN RAVEN POULTRY FARM.
Home of the great layers and choice fruits. Eggs for hatching at all times. Brown Leghorn and Barred P. Rock fowls, both young and old, for sale. Baby chicks in spring time. Place order now. Circular free. Write E. W. GEER, Farmington, Mo.

CREAM of the DAIRY NEWS

CLEANING THE MILK UTENSILS.

Editor RURAL WORLD: Good tin is the only practical material for milk vessels, and this should be kept shining and bright. Never allow utensils to become rusty or rough inside. Milk utensils must never be used for any other purpose.

First rinse the utensils in pure cold water, before using boiling water, as the heat will cook the milk onto the surface, forming a coating very difficult to remove. After rinsing the vessel free from milk, wash inside and out with hot water and soda. Rinse again in boiling water and then stand the pails and other utensils in the sun so that the rays will reach every part of the inside.

Milk cans should be kept out of the reach of dogs, cats or vermin.

For scrubbing the vessels a good hand brush should be used. It is most effective and can easily be kept clean. A cloth should never be used for washing milk vessels.

Ina, Ill. MRS. A. B. KIRK.

AYRSHIRE STOCK.

Ayrshire cattle found principally in the south half of Scotland, have in latter years materially improved in practical development.

In overcoming these earlier defects as dairy animals, the flat udder and very short teats which characterized them as show animals now gives place in the new type of Ayrshire cows to large udders and long teats.

Although the soil of Southern Scotland is very shallow, the country is devoted almost entirely to dairying.

It is safely claimed that upon this shallow soil some of the finest beef and dairy products to be found in the world are brought forth.

While the Ayrshire cow is forced right up to the standard for results, she is considered among the most economical producers. Unless she produces 258 pounds of butterfat during the lactation period she is omitted from the herd testing association's record, and an Ayrshire heifer must produce 206 pounds to be noticed in the records. As proof of the high yield per cow in the Scottish herd, it is said that many cheesemakers work in the Ayrshire district on the basis of furnishing the proprietor with 480 pounds of salable cheese per cow, and in some cases the maker pays for half of the expense of milking. He gets his profit from the extra yield of cheese beyond this amount and from whey. In the first place, it will take about 5,000 pounds of milk to produce the 480 pounds of cheese for the proprietor, so the cows must give a large yield in order for the maker to live.

The dairies in Scotland average between 60 and 70 cows per farm. Some herds have nearly 300 cows. The milk is manufactured almost entirely into cheese. They have some creameries, where oleomargarine and butter are both made.

Their barns are kept scrupulously clean, and in many cases are white-washed monthly. Stockmen, as well as dairymen, are very particular about protecting the health of their animals, hence whitewashing and ventilation receive special attention. Dairying is the special business with the people in the dairy districts, and it is carried on in an up-to-date manner.



MUST RAISE CALVES TO HAVE MORE BEEF.

The Iowa Beef Producers' Association is one of the live associations of the country, and is exerting an influence that is making itself felt among the beef-producing interests and the beef-consuming interests of Iowa and the country at large. This is an age of organization. People incline to go in droves and flocks. They admire leaders and are perfectly willing to be shown and to follow leaders and instructors when the principles upon which they base their organizations or associations appeal to the common interests of the public and the good of humanity, says Twentieth Century Farmer.

The Iowa Beef Producers' Association was organized for the purpose of encouraging the production of more beef cattle on the Iowa farms; for the creation of a farm interest that would mean larger profits for the producer of cattle, and at the same time secured increased productivity of the land. The growing of crops and the marketing of this produce could not be successfully carried on without the produce being first converted into beef and pork. The scarcity of cattle demanded that both breeding and feeding should go hand in hand on the same farm, and under the direction and guidance of the same supervisor.

Must Raise Calves to Have Beef.

The logical solution of the nationwide and world-wide scarcity of beef, according to the Iowa Beef Producers' Association, is to commence at home, at the foundation principle of beef production, by raising calves on the farm and maturing them into beef. It is this principle of production and preparation of the beef animal that the organized interests of the Iowa farmers, breeders, feeders and educational forces have combined to work out and demonstrate to the satisfaction of all their interested people.

There has been a great change of sentiment among Iowa farmers on the subject of keeping cows and raising calves for beef, since the first beef special train was run one year ago. Figures and evidence are produced that cannot be successfully refuted.

The growing of the calf has been the subject of considerable discussion among Iowa farmers. To arrive at some definite ideas on the cost of calf raising in the state, Rex Beresford, the expert agent of the Beef Producers' Association, visited during the fall and winter season of 1911-12 ninety-seven farmers engaged in baby beef production. Only one of these failed in receiving more than market price for all the feeds used in producing the cattle sold that season. Poor stock and lack of good management were assigned as the cause of the poor results in this case.

Figures on Cost of Production.

On twenty-four of the ninety-seven farms there were accurate figures kept as to cost of feeds. There were 816 calves raised on these twenty-four farms during the season and finished for beef. The average age when sold was 14.5 months, weight 832 pounds per head, and at an average price of \$8.30 per hundredweight, or \$69 per head. Corn consumed was figured at 60 cents per bushel, silage at \$4 per ton, cottonseed meal at \$30 per ton, clover hay at \$15 per ton and pasture for one cow and calf at \$1.50 per month, with other feeds proportionately high. These calves cost \$62 per head, leaving a profit of \$7 per head after all feed bills, interest and other expenses had been paid. The feed prices were all figured higher than farm values. In this estimate farms under poor or unfortunate management were averaged in with the more successful ones, thus lowering the average profits. Mr. Beresford found that where anything like proper conditions were observed in the feeding and handling of the calves, the business has been profitable.

Mr. Beresford in his talks said that there may be uncertainty with steer feeding when the prices of feeders and fat cattle are so nearly the same, as at present, but there is very little uncertainty in a fourteen to twenty months' old calf grown and fattened on a farm that has produced both the calf and the corn. Such a steer, he asserts, pays on the farm where he eats corn worth from 80 cents to \$1 per bushel, allowing market price for all the other feeds he consumes.

Value of Manure as a By-Product.

Special emphasis was placed by all speakers upon the value of the manure to the farm where cattle are grown and fed. It would seem that cattle feeding if nothing but the manure were had above the expenses. Several examples were recited of yields of varying grain and hay crops from cattle farms and farms where grain crops were yearly produced and sold off the farm into the grain markets. In a test where ten cattle farms and ten crop farms, representing various counties in Iowa, were compared, it was found that the ten cattle farms, for a period of five years, produced an average of fifty-two bushels of corn, thirty-nine bushels of oats and two and two-tenths of hay, as compared with the thirty-eight bushels of corn, thirty-two bushels of oats, one and two-tenths tons of hay grown off the ten crop farms.

Market Demand for Baby Beef.

Recommendations on the baby beef proposition are as follows: The calves are dropped in the spring and allowed all the milk of their dams until weaning time, with some grain usually. They are then started on feed and fed until the next spring or summer. Heifers and steers are fed together. The farmer producing baby beef can keep a half larger breeding herd and market a half more fat cattle each year than can the farmer producing two-year-olds. The extra weight of the latter will only partially make up for this increase in numbers. Another advantage of the baby beef is in the market demand. The handy weight of the 1,000 to 1,100-pound steer, if fat, makes it sell better than the heavier, more tallowy steer. All the coarseness and unfavorable features are avoided in the case of the baby beef.

The farmer can produce a pound of chicken as cheaply as he can a pound of beef, pork or mutton, and it always brings a better price.

HOUCHIN'S 100-TON SILO FOR \$100.

James Houchin has eight silos on his farm in Cole County, and cannot understand why any farmer will be without one. "I used to think there was something mysterious about a silo," he said. "There is no more mystery about it than there is about a kraut barrel. In fact, the principle is just the same. Most any man who is handy with tools can build one that will last for years. I have planned one that can be built for \$100. It holds 100 tons. I know it is a good one because I have put it to a thorough test. The dimensions are 16x24 feet. Use ordinary tongue and groove flooring material and line the inside with three-ply paper and encircle the outside with half-inch rods or hoops two feet apart. Ordinary telegraph wire will serve for guying. Make the door frame of two-inch material and groove it for the insertion of slats as the silo is filled. Line the door with a curtain of paper, just as you do for the main silo. When you stop to think that forty per cent of the corn crop goes to waste when the stalks are left in the field you will realize the tremendous loss your country suffers from lack of silos."

AYRSHIRE ASSOCIATION'S ANNUAL MEETING.

John R. Valentine, president, and C. M. Winslow, secretary, announce the annual meeting of the Ayrshire Breeders' Association, which is to be held in parlors of the Manhattan Hotel, 42nd and Madison streets, New York, on Thursday, January 8, 1914, at 2 o'clock p. m.

President Valentine will deliver his annual address and the reports of the secretary, the treasurer and the auditor will be read and submitted, also the report on Advanced Registry work, with rates of registration, etc. The question of special premiums at the Panama-Pacific Exposition will be considered, as well as other business that may develop.

This will be a meeting of general interest to all concerned in the progress of Ayrshire cattle breeding, to whom a cordial invitation is extended. After the annual election of officers the members will partake of an informal dinner given at the expense of the association.

At the Michigan station 15 acres of rape pastured 128 lambs for 7½ weeks, with a total gain of 2,890 pounds. Experiments at the Ontario station on a large scale indicated that the food provided by an acre of rape pastured by sheep was worth \$16.8. Throughout the northwest rape is sown with or without a nurse crop in the spring, or in the corn at the last cultivation.

It is impossible to have pigs make the most rapid and thrifty growth where skim milk is not available as a factor in the ration, but pigs can be grown quite successfully without the skim milk if they are not weaned too young. Pigs should not be weaned before they are eight or 10 weeks old, and should have a run on good clover pasture, but if this is not available, they should have some tender, green forage. By feeding a slop of fine middlings, a little oatmeal, at first with hulls sifted out and later by adding cornmeal and a little tankage to the ration, very good results will be secured. A little oilmeal may be added to advantage, but bran is too coarse a feed and contains too much fiber to be profitably made a factor in the ration of the small pigs. It will require much skill to do this, but it can be done.

POLAND CHINAS

Out of stretchy cows and 1000-lb. boars. Buy them and win. Also Angus cattle. J. F. Wimmer, box 9, Alton, Ill.

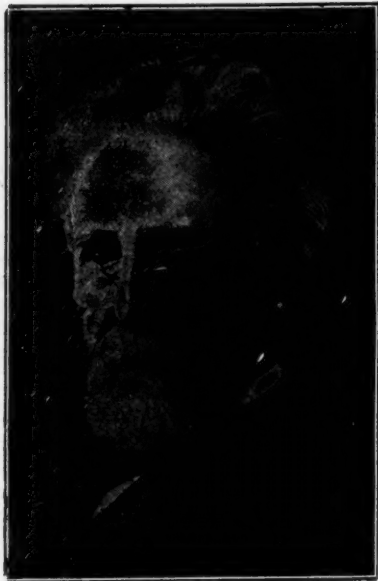
COLMAN'S RURAL WORLD

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Edited by A. CAMPBELL McKIBBIN.
C. D. LYON, Associate Editor.

CONTRIBUTING EDITORS:
P. P. LEWIS, Prest. State Board of Agr.
J. T. STINSON, Sec. Mo. State Fair Assn.
C. A. NEWTON, Dr. of Vet. Surgery



Norman J. Colman,
First U. S. Secretary of Agriculture.

COLMAN'S RURAL WORLD was established in 1848 by Norman J. Colman, who later became the first United States Secretary of Agriculture. As a champion of advanced agriculture this journal has attracted nation-wide support, and is to-day held in highest regard by thousands of intelligent and discriminating readers.

COLMAN'S RURAL WORLD strives to bring the greatest good to the greatest number at all times. Each issue is replete with helpfulness and good cheer. It is read for profit and pleasure, and yields a satisfactory return to each individual subscriber. Our advertisers are rewarded with excellent results.

COLMAN'S RURAL WORLD is mailed postpaid to any address in the United States or island possessions for one dollar per year or three years for two dollars. All subscriptions payable in advance. Remit by draft, registered letter, postoffice or express money order. In changing address give old and new addresses.

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Philadelphia's climbing birth rate pleases as well as puzzles the specialists in vital statistics in that city. Last year it was 28 per 1,000 population, which equaled or exceeded that of any large city in the country. It is already evident that this year the rate will be still higher. Moscow has a birth rate of 35.2, and Liverpool one of 30.2; but no other large European city even approaches Philadelphia in this item of productive industry.

When it is considered that vigilance in searching out cases of disease and getting them on the record has greatly increased in recent years, it is highly reassuring that the New York City death rate for 1913—approximately 13.71 per thousand—is the lowest in the city's history, following the previous low record of last year—14.07 per thousand. This favorable record of mortality is paralleled by the number of cases of infectious diseases.

WALKS AND TALKS WITH THE EDITOR.

THIS week we will take a little peripatetic pilgrimage from the farm to the country village, there to visit with a former neighbor who "retired" several years ago and moved from Elm Springs to Highlands, where the family is comfortably domiciled—but housesome.

What a hearty handshake you get at the door. My, but they are glad to see you, and questions come so thick and fast about the folks they know in the country that you can scarcely find words to make ready reply.

You are reminded of the time these good people decided to "move to town," and recall the reasons that were then deemed good and sufficient.

Uncle Hiram had earned a competence. Aunt Samantha had worked in faithfulness through long years of patient effort on the farm. Both the boys were voters now, and the daughter had blossomed into young womanhood. While attending school in the village the children formed acquaintances who sympathized with them in their "loneliness on the farm," and urged them to "move to town and be comfortable."

Uncle Hiram selected a well-built frame cottage with a few peach trees, grape arbor and chicken yard on the spacious lot in the rear. He had learned by experience the value of fruit and poultry products, and chuckled a little in anticipation of the yield.

It was early fall when these good people left the farm. They wanted to be comfortable in winter. Wouldn't have to hitch up and drive to town for supplies, while the sons would enjoy the advantages long denied, and the daughter would assume her proper place in the social circle.

This picture allured Uncle Hiram and family from Elm Springs, and the little county paper at Highlands welcomed them as residents who would help the town.

It was necessary to have a sale and dispose of personal property that would not be required in town, and besides, they would have to get new furniture; the old walnut bedsteads and marble-topped bureaus would never do. Nothing but tubular brass beds and Princess dressers, and Aunt Samantha's rag carpet, even if it was new, just had to be displaced with a Wilton velvet rug.

That was several years ago, and the family lived with ease, spending only the income from their accumulated resources.

Of course the few fruit trees they had were all of an early variety, and when pinched by frost the crop was a total failure. Instead of the chickens practically finding their own living, as they did on the farm, it cost more for feed than the return in eggs.

It was pitiful to see Uncle Hiram mope about town. He had been an active and aggressive man. His days were two hours longer than his neighbors', for when he arose they were wrapped in deepest slumber, and in the evening, when he retired they were enjoying the revelry incident to various occasions.

Uncle Hiram was a misfit in town. They taxed him enough for street improvements to have kept in repair miles of country roads. Other municipal institutions, in which Uncle Hiram was little interested, had to be maintained.

Aunt Samantha was a constant companion, as she had been on the farm, but the children were absorbed in the new delights about town and rarely joined the home circle in the evening.

The picture is not overdrawn. You

LOOSENED LEAVES FROM LITERARY LAURELS

Ingersoll on Napoleon.

"A little while ago I stood by the grave of the old Napoleon—a magnificent tomb of gilt and gold, fit almost for a dead deity—and gazed upon the sarcophagus of black Egyptian marble, where rests at last the ashes of the restless man. I leaned over the balustrade and thought about the career of the greatest soldier of the modern world. I saw him walking upon the banks of the Seine, contemplating suicide; I saw him at Toulon; I saw him putting down the mob in the streets of Paris; I saw him at the head of the army of Italy; I saw him crossing the bridge of Lodi with the tricolor in his hand; I saw him in Egypt in the shadows of the pyramids; I saw him conquer the Alps and mingle the eagles of France with the eagles of the crags. I saw him at Marengo, at Ulm and Austerlitz. I saw him in Russia, where the infantry of the snow and the cavalry of the wild blast scattered his legions like winter's withered leaves. I saw him at Leipsic, in defeat and disaster—driven by a million bayonets back upon Paris—clutched like a wild beast; banished to Elba. I saw him escape and retake an empire by the force of his genius. I saw him upon the frightful field of Waterloo, where chance and fate combined to wreck the fortunes of their former king. And I saw him at St. Helena, with his hands crossed behind him, gazing out upon the sad and solemn sea. I thought of the orphans and widows he had made; of the tears that had been shed for his glory, and of the only woman who ever loved him pushed from his heart by the cold hand of ambition. And I said I would rather have been a French peasant and worn wooden shoes."

perhaps know a good friend or neighbor in this same predicament.

Why doesn't the farmer "retire" on the farm? Why not provide town comforts in the old homestead, and combine the health-giving environment of the blessed country with the rest and recreation that has been earned?

The government "seed graft," which has long been a national joke, may be materially reduced if Secretary Houston's ideas are carried out. He asks for seeds \$296,000, or \$146,000 less than at the last session. And his idea is to substitute for a haphazard distribution to constituents a system of scientific experiment as to the practical value of new varieties of crops. The reform would be very painful to people who have been accustomed to take free seeds simply because they are free.

The egg shortage on January 31, 1914, in New York alone, will be 185,000 cases, according to the president of the American Association of Refrigeration, who overwhelms one with figures tending to show that no cold-storage combination is responsible for the present high prices. The receipts at New York fell off 196,248 cases in the period between March 1 and October 31, compared with the same period last year. According to this authority, the conspiracy laws should be enforced against the hens, if exact justice is to be done.

It is declared in Washington that a preliminary inquiry has revealed the fact that 55 per cent of the present egg supply held in storage is controlled by the meat packers. The amount of truth in these charges calls for investigation and the widest publicity.

The Query Box

Health Hints.

B. M.—Elderflower cream: Take half pound freshly gathered elderflower, weighed after stripped of stalks. Melt three pounds unsalted lard in perfectly clean lined saucepan, and when melted add the elderflowers. Stand saucepan with its contents where it will keep really hot without boiling, three hours. By the end of that time the fat will have absorbed all the virtues from the flowers, and the mixture should then be strained through a fine hair sieve, that has first been dipped in boiling water, into a basin that has also been heated. Having strained the mixture, beat it up for five minutes with a small wooden spoon to make it white, and put into china jars with covers, and paste a strip of paper where the lid joins the pot, to help the cream to keep. Keep for reference.

Miscellaneous.

E. M. C.—Tacky party: Men wear baggy-kneed trousers, moth-eaten sweaters, loud bandanas and battered derbies, while the ladies affect threadbare garments, false switches, and anything ridiculous that is suggestive of worthlessness. Serve turnips and hardtack.

V. L. E.—Pullman service rules require that conductor shall be at least 5 feet 6 inches tall and at least 25 years old. Other requirements are that he shall have been employed at least 5 years with satisfactory recommendation from former employer. Pay \$75 to \$90 a month.

R. D. E.—Ambassadors appointed by President Wilson: Frederick C. Penfield, Pennsylvania, to Austro-Hungary; James W. Gerard, New York, to Germany; Walter Hines Page, New York, to Great Britain; Thomas Nelson Page, Virginia, to Italy; George W. Guthrie, Pennsylvania, to Japan. Appointment of H. M. Pindell to Russia not yet confirmed.

A. S. K.—As to whether the ocean at one end of the Panama Canal is higher than at the other, the Isthmian Canal Commission says: The mean level of the two oceans is the same, the only difference being that on the Atlantic side the tidal oscillation at Colon does not exceed two feet, whereas on the Pacific side at Panama the tidal oscillation is sometimes as great as 20 feet, i. e., 10 feet below and 10 feet above the mean level. The difference in tides will not affect the canal, inasmuch as the summit level of same is 85 feet above the mean level of the two oceans.

G. A. H.—To see in St. Louis besides Eads Bridge and great churches and fine residences: House where Grant was married, southwest corner Fourth and Cerre; first brick house west of the Mississippi, southeast corner Main and Spruce, built 1818; site of Fort San Carlos, built by Spanish, 1794, Southern Hotel site; Fourth and Washington, where Benton lived; Forest Park and World's Fair grounds, with Art Museum, Zoo, etc.; Tower Grove Park and Shaw's Garden; Fairground; the Mississippi to Alton and Montesano: Public Library; our great school buildings; city pumping station; the great breweries; the old arsenal; Bellefontaine and Calvary cemeteries; Jefferson Barracks and National Cemetery; downtown shopping district and skyscrapers; Courthouse, where slaves were sold; City Hall; Forest Park Highlands, Delmar Garden, Creve Coeur Lake, Meramec Highlands, Suburban Park, Grant farm, the tablets, the great shoe factories, Union Station, the Waterworks, the Insane Asylum and the Crematory.

Some Odd Things About Christmas

IN Greece the kallikantzaroi are generally represented as mere tricky sprites who live, as a rule, underground, appearing to men only on the nights of the year between December 25 and January 6. They pass the days during this period in dark caverns, where they subsist on serpents and lizards, and come forth to dance in the moonlight, either alone or in company with the nereids, and also with mortal women, if they can lure any to join them.

Indians say the best time to catch a deer is on Christmas night at 12 o'clock, when they believe the deer kneels.

Roumanian girls can learn, during the Christmas season, whether or not they are going to be married within the coming year. At midnight they enter the stable and strike the foot of the first ox they come across, saying: "This year; next year." If the ox get sup at the first stroke the girl will marry within the year; if it gets up at the second stroke the marriage will take place the year following; if it does not get up at all the gods have not yet decided on her wedding date.

In many countries where they go by the old calendar Christmas is celebrated January 6, the celebration beginning twelve days before.

Cakes weighing from one to twelve pounds are made in Friedrichstadt. They place them in exalted position and play to them, representing, as they do, St. Nicholas. Of rye bread they make a boar or hog, six or seven inches high, with gilt snout and tail, with gold rings around its knees. The business men put goods they have exhibited for sale on a revolving disk and raffle them off.

Glingest (Kind Jesus or Child Jesus) presides over all Christmas celebrations in Schleswig-Holstein. He is supposed to bring presents to the children, and sometimes punishes naughty ones.

On Christmas day in Dittmarsh the cattle get an extra allowance of fodder. The cats and dogs, too, get better meals. At times the cattle are admitted to the higher joys to the extent that a candle is placed above the trough from which they feed, just as each member of the family has his own candle, made by himself. These candles must be heavy and big, for the one that goes out first will die first.

Some of the Germans believe that those born on Christmas day have the power of seeing spirits, and even of commanding them.

The after-dinner dishes must not be washed at once. They must be left until ten minutes before midnight, when the young folks take them outside to a well and wash them, for in the water they can, at midnight, see the faces of their future lovers and sweethearts.

Oxen kneel in the stall at midnight on Christmas, says English tradition. They kneel as if in adoration of the Nativity.

When Christmas draws near every French family in easy circumstances sends for a cask of wine and lays in a stock of southern fruit. Those who have been enemies pardon each other; marriages are fixed; married pairs who have been separated are reunited.

A popular saying in Spain for Christmas day is "the bird of dawn singeth all night long to frighten away all evil things."

Christmas celebrations in Mexico begin December 17 and continue until

December 24. Each night a festival is held, nine in all, an invitation being sent out to these "posadas." "Posada" means "inn," typifying the day the holy travelers, Joseph and Mary, sought in vain for rest and shelter.

The young Armenians, on Christmas day, pay "hand-kissing" visits to their elders.

To learn the qualities of her future husband the Roumanian girl, on Christmas eve, partially disrobes, loosens her hair, bandages her eyes, and braving the cold goes into the courtyard, where she commences to count the stakes in the hedge. When she reaches the ninth one she binds it with ribbon or with threads of hair and re-enters the house. The next day she examines the stake; if it is upright and sound, her husband will be young, strong and handsome; if bent, her husband will be old and ugly.

Christmas seems to have been first observed between 180-190 A. D.

The custom of making gifts at Christmas is widest spread in Germany, where even casual acquaintances express their regard for each other by making small presents.

Old Christmas fare did not include the turkey, now the modern Christmas bird. In olden days a roasted peacock took its place on the festive board.

PATCHING ROOFS.

By C. D. Lyon.

We had intended re-roofing a barn this fall, but failed to do so, and as it is an old white pine shingle roof, leaking pretty badly, something had to be done.

A neighbor had torn off a standing seam metal roof that had been damaged in a storm, and the boys got a wagon bed full of the old metal sheets. Each sheet was 2x6 feet, and by bending over the edge of a board, then taking the sheet cross a block of wood and hammering down it was no trouble to break the sheets to 8 inches wide strips. Then by bending and breaking again we soon had a hundred or two 8x12 metal "shingles," and it was little trouble to slip these under the wood shingle at the leaky places and one 3-penny nail holds them fast.

If any of our readers will try this plan of patching old shingle roofs they will never use any other. Where old metal roofing is not to be had, cheap rubber roofing or even tarred paper, cut into 8x12-inch strips may be used, and it makes a better patch than new shingles at not one-third the cost.

When we re-roof the barn, we will use some of the prepared roofings, not having much choice as to kind, as we can buy them guaranteed for 12 years at about \$1.50 per square.

OUR HOLIDAY EXCHANGES.

Among the many creditable holiday exchanges that are before us, the Breeders' Gazette, Chicago; Wallace's Farmer, Des Moines, Iowa; the Horse Review, Chicago; the Horseman, Chicago, and Rider and Driver, New York, are issues that are especially attractive in their fetching Christmas attire.

Gorgeous colors, mammoth quantity and timely subjects, handsomely printed and illustrated, are among the attractive features of their make-up. Artistic half-tones, photo-lithographic inserts and autochrome reproductions embellish their pages.

The live advertising divisions of each journal generously and skillfully exploit the products of a long list of enterprising advertisers.

SOME RABBITS.

By C. D. Lyon.

On the farm of Perry Cahal, in Brown County, Ohio, from the opening of the hunting season, November 15, to Thanksgiving day, more than 700 rabbits have been killed, one man shooting 70 in a single day. On the Wilson farm, not more than half the size of Mr. Cahal's, near 400 have been killed and on a good many 100-acre farms up to 250.

One man shot 27 rabbits in one hour, missing but four shots, and another man killed 16 at 16 straight shots, many others doing nearly as well. Two boys got 51 in less than half a day, and one man shot seven before he picked any of them up.

At the opening of the season they sold at \$2.40 per dozen, but went down to 40 cents, although prices had gone up to \$2.00 per dozen again Thanksgiving.

Ohio has a license law, \$1 for license to hunt, but permits farmers to hunt on their own farms without license. This law is strained a little, as neighbors combine and hunt on one another's farms, but the law has broken up the crowds of town boys who roamed over our fields, as it requires a written permit to hunt on the lands of another.

A dressed rabbit weighs near two pounds and at 15 to 20 cents, furnishes cheap and wholesome meat for those who like it. The Ohio season closes December 5, but farmers will continue to hunt on their own farms up to February.

MARIONVILLE, MO., NOTES.

Editor RURAL WORLD: We are having warm, cloudy weather—just ideal weather for handling shock fodder, and there is a lot of it being handled. We have about 250 shocks; been hauling three days; have five more shocks in the field; will finish it to-morrow. Shocks standing up straight and are badly damaged. Had a warm and wet spell of weather soon after it was cut. We drove stakes in the ground about 20 feet apart; top of post four feet from ground and braced end post, and then stretched a wire and stapled it on top of post, and set fodder on each side. Got a rick of fodder 60 rods long and 8 feet wide at base. If fodder was of good quality it would be worth 20 cents per shock.

As scarce as feed roughage is quite a lot of corn and oats are being shipped in this section; it is all shelled corn and is selling at 80 to 82 cents per bushel. Oats are selling at 50 cents. Baled straw at 20 to 25 cents per bale. Eggs 30 cents per dozen. Butter, country at from 20 to 25 cents per pound; creamery 30 cents. Corn grown in this section is selling with shuck on, from 70 to 75 cents per bushel and shocked from 80 to 85 cents. We have lettuce, cabbage and onions growing in our garden. I sowed turnips first of October and now, December 4, are as large as medium saucers. When the rainy season set in, September 25, our late cabbage had four leaves; now they have heads as large as half-gallon measures.

I will now invite RURAL WORLD readers to the southeast corner of Lawrence County to eat green vegetables and big red apples, and maybe about Christmas I can invite them to come down and sleigh ride. Well the town ducks and professional loafers are putting in good time killing what few quail that are left. I understand that the law has cut the hunting period down to one month. Hope they will cut it out entirely. It's a nuisance. A few days ago three boys from town were out hunting and their old bird

dog caught a neighbor's sheep and would have killed it had the owner not been near. My sheep were just across the road and had it not been for my boys who were working near our sheep the dog might have caught our sheep.

We need more sheep and more industrious boys and fewer dogs and idle boys. Thirty and forty years ago when we had plenty of quail and wild song birds we had but few insects and had better crops. The farmers and their sons have no time to hunt, and it is too bad for the farmers to be bothered with the loafing class.

Quite a lot of plowing has been done in this section this fall, but ground is too wet now. There are a few farmers plowing, but they are the kind who do not value their land as they should. I saw an article in a local paper last week in which a hay seeder wrote as follows: "Farmers who plowed their corn deep have some corn to sell, but those who practice shallow and level cultivation have to buy corn," but he didn't give an explanation. This is easy to solve. Those farmers who practice shallow and level cultivation; are the up-to-date farmers who have plenty of live stock and pastures and big red apples and money to buy corn, and the latter class of farmers know there is more money in live stock pasture and big red apples than in growing corn. When you have your land sowed to grasses and pasture it with live stock you are making your land better. Those farmers who grow a little corn and wheat and sell all their wheat and straw and most of their corn are the class of farmers who have poor land and are not prospering.

This country needs more up-to-date farmers, more cattle, hogs, sheep and dairies, and more clover and grasses. Southwest Missouri is an ideal live stock country. We can produce any kind of clovers and grasses, corn, wheat, rye and oats and all kinds of vegetables and fruits. Many farmers are plowing their old pastures as the dry season killed the most of the grass. This land will be planted to corn next spring.

Friend Lyon, if you will come down in this part of the Ozarks you can get plenty of mushrooms and all kinds of tame and wild greens and vegetables, and see our up-to-date business women, who are watching, waiting and praying for the time to come for them to vote for woman suffrage, and see the Farm Student, who will vote with them.

E. N. HENDRIX,

Farm Student and Information Seeker.

TAKE THE RIGHT LINE.

If you are on the Gloomy line,
Get a transfer.
If you are inclined to fret and pine,
Get a transfer.
Get off the track of Doubt and Gloom,
Get on the Sunshine track—there's room;
Get a transfer.
If you are on the Worry train,
Get a transfer.
You must not stay there and complain,
Get a transfer.
The cheerful Cars are passing through,
And there's a lot of room for you;
Get a transfer.
If you are on the Grouchy track,
Get a transfer.
Just take a Happy Special back;
Get a transfer.
Jump on the train and pull the rope
That lands you in the station Hope;
Get a transfer.

Home Circle

CHRISTMASTIDE.

Christmas hath a darkness

Brighter than the blazing moon;

Christmas hath a chilliness

Warmer than the heart of June;

Christmas hath a beauty

Lovelier than the world can show.

—Christina Rossetti.

Heap on more wood! The wind is chill;

But, let it whistle as it will,

We'll keep our Christmas merry still.

—Walter Scott.

Ring out, ye crystal spheres? Once
bless our human ears,

If ye have power to touch our
senses so,

And let your silver chime move in
melodious time,

And let the bass of heaven's deep
organ blow,

And with your ninefold harmony make
up full consort

To the angelic symphony.

—John Milton.

It is the Christmas time,

And up and down 'twixt heaven and
earth

In glorious grief and solemn mirth
The shining angels climb.

—D. M. Mulock Craik.

Shepherds at the grange

Where the Babe was born

Sang with many a change

Christmas carols until morn.

—Henry W. Longfellow.

The star which they saw in the east

Went before them till it came and

Stood over where the young Child was.

—Matthew.

"Merry Christmas!" hear them say

As the east is growing lighter.

May the joy of Christmas day

Make your whole year gladder,
brighter.

—Margaret Deland.

Again at Christmas did we weave

The holly round the Christmas hearth.

—Alfred Tennyson.

Sing the song of great joy that the
angels began;

Sing of glory to God and of good will
to man.

—John G. Whittier.

Written for the RURAL WORLD. THE LOGIC OF CHRISTMAS GIFTS

By Sallie.

Christmas time to some is a merry and joyful time, but to some it is sad. Some are too worried and hurried to get much good out of it. The giving of presents has come to be a tax to many. How many useless gifts are made when the giver cannot afford it? It takes a good bit of courage to refuse to do what everybody around you is doing. No one likes to be thought queer or be called stingy, but it is better to let people think what they will rather than be dishonest, and if one must let the grocer or merchant go unpaid in order to give presents, it is getting near dishonesty.

When we were children and all at home, sometimes Christmas brought us candies and small presents. Often there was just a few toys and some candy, a pretty new dress or suit, or

something we needed. We enjoyed what we received just as much as those who received a great deal more. Sometimes we felt like envying some of our more fortunate friends, but we soon got over that. Parents can usually train their children to be content with what is given them. Parents of the past generation did, and those of the rising generation ought to be as able as they.

We are told in the Good Book that little children "of such" are "the kingdom of heaven," and it is said of those that offend them it were better that a mill-stone were put about their neck and they cast into the depths of the sea. Little children do not know right from wrong, and to teach them wrong is right, and right is wrong, is surely offending them. Nothing is too hard or impossible for them to believe until they find out they have been fooled, and even then they forget and forgive easily.

Cedar Hill Farm, Valley Park, Mo.

Written for the RURAL WORLD. OUR FRIEND, THE APPLE.

Fortunately for us who live in town, fruit has been plentiful the past summer, and those of us who were able to fight the extreme heat and still retain a bit of surplus energy for the work of the canning season now have our reward.

Glass jars, packed in neat rows in the preserves closet, glow richly with the various colorings of the contents—the deep gold and topaz of peaches, the amber of pears, warm red of quinces, the royal purple of plums, the dark blue and crimson of berries, and the countless tints and shadings of apples.

And this brings me to the subject which was uppermost in my mind when I began this short letter to the RURAL WORLD—the royal apple, which remains to us when the richer and more luscious fruits are no longer within reach, except such as we have captured and imprisoned in glass cages.

Hail to the apple, which scarcely deserts us the year round—the dependable fruit that obligingly lends itself to innumerable variations in its capacity as an edible. For you may serve it up seven times a week and almost three times a day as a plain sauce, and it is relished—at least that is true of the family I represent. You may sugar it, and butter it, and bake it to a globe of fluffy deliciousness, or a mound of jelly-surrounded delight. You may simply polish its coat to a ruby glimmer, a golden gloss or a satin-like emerald sheen, and pile it high, uncooked, in your best glass fruit dish, and behold, you have a center piece for your banquet board that is matchless in its simplicity.

And then there are pies, and dumplings, fritters, puddings; there are composite desserts in almost unlimited numbers which may be worked out to a climax of luscious perfection, of which the plain apple is the soul and foundation.

A good apple year will go far even to mitigate the terrors of unexpected company to dinner. Let my store closet abound with juicy Greenings, bouncing pippins of the Grimes' golden variety, and those big, ruddy apples that cook soft, yet keep the shape of the large, pink-tinted quarters—and Uncle Joe, Aunt Susan and the children can drop in to see me when they like.

All hail to man's best fruit-friend,
the Apple.

MRS. ESS.

Written for the RURAL WORLD. LETTER TO SANTA.

By Albert E. Vassar.

Dear Santa Claus, I write you that
Our horse you sure may find.

A great big frame, with shutters
brown,

A "wind-mill" stands behind.

And cross the way is where I tend

The little Sunday School.

I am so good and I read tonight

The dear old golden rule.

Now what I want, old Santa dear,

I'll write a note and send,

And but a few things will I ask

Of you, old Santa friend.

A pair of boots, a top, a sword,

A fiddle and a drum.

A pair of skates, a soldier cap

And a shining little gun.

A span of goats, a hobby horse;

A slate, the kind that close,

A banjo, harp, and then some games,

And just one suit of clothes.

A whip, a wagon and a cart,

A whistle and some rings.

A little bear, a string of bells,

And then some other things.

If you just knew how I love you

You'd fill my list complete,

For day and night I think of you

Ev'n while I am asleep.

And when your picture I have seen,

Or of you I have read,

I am so pleased, so awful glad,

I most stand on my head.

Now goodbye, Santa, love to you,

And Mrs. Santa, dear.

The bestest folks are all so few

Who fill our hearts with cheer.

P. S.—No dogs to bite.

VALUE OF HOME CANNED GOODS.

The balanced ration of many Americans today is made up something as follows: Bread, butter, eggs, meat and fish, potatoes, patent medicine laxatives.

Many Americans customarily suffer from one of the following complaints: Indigestion, constipation, rheumatism. A simple change of the daily menu might go a long way to remedy these ailments, according to the Bureau of Plant Industry's specialist in charge of Canning Club Work. This specialist recommends a change to a menu more in keeping with nature's plan, something as follows: Bread, butter, fruit, vegetables, greens, meat, fish, eggs.

He recommends that every family provide a diet of fruit and vegetables for every day in the year. This would do much to eliminate the need for patent medicine laxatives that figure so prominently in many Americans bill of fare. If every home kept on hand enough canned products so that there might be a can of fruits, a can of greens and a can of vegetables for every day during the winter, there would be little need for the laxatives now so regularly purchased from the corner drug store. There would also be great economy in the substitution of an inexpensive food for more expensive ones.

More home canning, done at the proper season, would enable the average family always to have the proper quantity of canned products, and would save an astonishing amount of food that goes to waste every year. It is estimated that over 50 per cent of all the vegetables, greens, fruit, and berries that grow in this country, go to waste and are actually lost to those who need them. This is simply because housewives have not learned to care for these surplus products efficiently and to make them available for the winter months by canning.

That home canning may reduce the cost of living is not generally appreciated. Even those who are accustomed to use a supply of canned goods

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in the winter, do not realize that they sometimes pay transportation on goods from distant parts of the country, when there is a surplus of the same product in their own vicinity during the summer months, which might have been saved by home canning.

For example, a can of tomatoes is bought during the winter in certain districts of Colorado for fifteen cents. Tomatoes are taken as an example, as this is one of the canned products which appears most frequently on the shelves of groceries throughout Colorado. This can was put up in Maryland. The people of the section where it was purchased live in an irrigated district, where there is always a surplus of tomatoes in summer, yet they pay transportation on vegetables from Maryland, when they might have cost about five cents. When one considers the number of cans used throughout the country, which have been shipped great distances, one realizes the enormous saving a little intelligent home canning might bring about. Home canning, however, should not seriously affect the business of commercial canning factories. There will always be plenty of people who have neither the time nor inclination to can their own products. More home canning on the contrary will accustom people more and more to using canned products in general.

Some practical experiments have been made in the laboratory of the Bureau of Plant Industry's Office of Farm Management, from which every home, where canning is possible, might profit. This laboratory is not what is known as a "modern well-equipped laboratory." In fact, it does not look like a laboratory at all. It contains simply what every average home may have, and is nothing more nor less than an every-day kitchen. Here recipes that are applicable for every home have been thoroughly tested, and are gladly furnished to any housewife upon application.

Several kinds of simple canning outfits, available for every home, are described in the Department of Agriculture's Farmers' Bulletin No. 521. This also contains valuable suggestions on tomato canning, which are applicable to other canned goods, and includes definitions of canning terms which should be valuable to housewives not familiar with some of the more technical terms.

Written for the RURAL WORLD. A HOME RESOLUTION.

By Myron B.

Resolved, That since all humanity passes through some mother's hands, that we American mothers form an endless chain, taking up all subjects that will aid our endeavor to become better mothers of better children. That we as far as possible turn our homes into schools for self-improvement for ourselves and families. That we try to make home the best and safest as well as the most attractive place on earth. Also that we ask the fathers of these homes to help us with our high endeavors.

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Horticulture

FRUIT NOTES.

Editor RURAL WORLD: I will tell your readers how to kill tree borers and prolong the life of their fruit trees. Dig the ground from around the trees so as to form a basin. Into this basin pour strong soap suds, which have been allowed to stand for a few days. Add to these suds about one quart of soap to each ten gallons. This will prove sure death to the borers and is much better than trying to cut them out with a knife, especially in dry weather.

For a wash for the trunk of the trees, the soap suds should be thickened with slack lime and the trunk thoroughly washed from roots to limbs in July or August. The flat-headed borer is the worst enemy of the peach tree.

Peach trees would last twice as long as they do if they were washed once each year and kept trimmed. In trimming cut away about half the previous year's growth. Trim so that the lowest limbs will be about fifteen inches from the ground, so that they can be wrapped if necessary to save the buds from being winter killed. The fruit may then be picked easily on the ground. It is a mistake to let peach trees grow tall. JACOB FAITH.

ORCHARD AND GARDEN NOTES.

December 22.

Go over the house plants and remove all scale or other insects.

Do not plant elm or other large trees less than forty feet apart.

Plan to attend the nearest short course or institute given. Go prepared to ask questions.

Are the hyacinth and tulip bulbs rooting well in the cellar? Perhaps they need a little more water.

The Norfolk pine, poinsettia, cyclamen, crab cactus, Boston fern, and Jerusalem cherry all make good plants for Christmas use.

One local fruit association has handled over \$50,000 worth of fruit this year at a cost of about five per cent. They have sold all the fruit for the members and at a marketing cost less than if individuals had done it.

Can the door yard be improved by planting a few shrubs and plants there? Now is a good time to study the matter. Select those shrubs that have some attractive feature over a long season, such as lilac, peony, spirea Van Houttei, and high-bush cranberry.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

CRANBERRIES NEED PEAT SOIL AND SAND.

"To grow cranberries you must have peat soil," says Prof. C. I. Lewis of the Oregon Agricultural College. "If the soil contains much clay the vines will grow, but the plant will not be very productive."

"First, the land is thoroughly cleaned off, all trees, brush, grass and even grass roots being removed. The land is then leveled and several inches of sand, free from grass and salt, is spread on. It is important to keep the water table within a foot of the surface during the growing season. If there is a stream of living water on the land it is all the better, since you can flood the land with this and help to keep down insect and frost injuries."

O. A. C. has no cranberry bulletin at present, but valuable ones can be secured by writing to the Wisconsin

Experiment Station at Madison, the Massachusetts Agricultural College at Amherst, or by sending for the December number of Better Fruit, published at Hood River, Ore., which contains a special article on cranberries by C. N. Bennett of Warrenton, considered one of the best experts in this industry on the coast.

GERMANY FINDS THAT POTATO GROWING IMPROVES SOIL PRODUCTIVITY.

American potato growers will be interested in the fact that German farmers have found that many indirect benefits result from potato culture, through modern methods of crop rotation, green manuring and fertilizing. In a recently issued bulletin entitled "Lessons For American Potato Growers From German Experiences," the department's specialist describes among other things how Eastern Germany benefits from the cultivation of the potato.

The potato has played the greatest role in the agricultural development of light and fertile soils of this region, as the sugar beet has done in heavier soils. According to German specialists, these hoed root crops are beneficial to any soil, through the deep and thorough culture that is given them, with its resultant improvement in the physical condition and aeration.

The profits from the crop justify the liberal use of commercial fertilizers, from which there are important residual effects on other crops in the rotation. The clean culture practiced also brings all weeds into thorough subjection. The yields per acre of all farm crops have been greatly increased since the extension of potato growing.

Potato tops are now dried and used for stock food on many estates. The by-product, mash, resulting from the distillation of potatoes into alcohol, is also an important economical factor.

The Potato in the United States Must Compete With Corn and Petroleum.

While we have, in fact, better soils than Europe in almost unlimited area adapted for potatoes, our hot summers injure the potato plant, where they aid in the development of our great grain crop, corn. In the corn belt there can never be profit in growing potatoes in excess of those needed locally for table use. Corn can be produced more economically, is better for stock feeding, and is a cheaper source of starch and alcohol. Further north, however, and in the elevated western districts where corn cannot be raised, potato growing has a greater future.

However, vast deposits of petroleum will also offer competition indirectly to the potato, as at present there is not the need in this country that there is in Germany for potato alcohol. Nevertheless, we are using up our great petroleum resources and the time may not be far distant when the distilling of alcohol from potatoes may become an important industry.

A NEW USE FOR SILOS.

A live Missouri farmer has made the upper eight feet of a forty-six-foot concrete silo into a water tank that holds about 10,000 gallons. The water is pumped to the top of the silo by a gasoline engine and supplies running water for the house and the barnyard. Moreover, the heat generated by the fermentation of the silage keeps the water from freezing during the coldest days of winter.

TEXAS INDUSTRIAL CONGRESS POSTPONED.

On account of the serious illness of Col. Henry Exall, president of the Texas Industrial Congress, the annual convention of the congress which was to have been held in Dallas Dec. 13, has been postponed until February, when it will be held at Dallas in connection with the sixth annual exhibit of the National Corn Exposition.

One of the largest nurseries in the United States is conducted by the forest service near Haugen, Montana. It is known as the Savenac nursery and has a capacity of 4,000,000 young trees a year.



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Cut in six sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. It requires 2½ yards of 44-inch material for a 36-inch size. Price 10c.

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Cut in six sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. It requires 2½ yards of 36-inch material for a 36-inch size. Price 10c.

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Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6 yards of 36-inch material for a 36-inch size. Price 10c.

9805-9791. Ladies' Costume.

Waist 9805 cut in six sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. Skirt 9791 cut in five sizes: 22, 24, 26, 28 and 30 inches waist measure. It requires 6½ yards of 44-inch material for a medium size. This calls for TWO separate patterns, 10c for each.

These patterns will be sent to RURAL WORLD subscribers for 10 cents each (silver or stamps).

If you want more than one pattern, send 10 cents for each additional pattern desired.

Fill out this coupon and send it to COLMAN'S RURAL WORLD, 821 Holland Building, St. Louis, Mo.:

Pattern No. Size Years
Bust in. Waist in.
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In ordering patterns for Waist, give bust measure only; for Skirts, give waist measure only; for children give age only: while for patterns for Aprons say, large, small or medium.

Horseman

H. A. Greenwell, Lakenan, Mo., sold to A. W. Ivins, Salt Lake City, two stallions and three fillies, all well bred saddle stock.

The Ghost, 2:16 $\frac{1}{4}$, brother of Harry the Ghost, 2:04 $\frac{1}{4}$, is now owned by F. J. Cole, Brookfield, Mo. It is said Mr. Cole has one of the best prospects in the Middle West in the Ghost.

Dr. C. H. Suddart, Smithville, Mo., has at head of his saddle horse stud the popular stallion, King Joy Lo, by King Artist, he by Artist Montrose 51, dam by Artist Whirlwind by Artist Montrose.

A. L. Atkinson, at Breckenridge, Mo., the owner of Charley Noel, also owns his dam, and has been mating her with some of the best stallions in the state, and her produce will be fully developed, so it will be only a few years till she is listed with the great brood mares.

Merlo Mac, 2:18 $\frac{1}{4}$, the good-looking 7-year-old daughter of McAdams, the 2:10 siring son of Simmons, 2:28, is out of Jeanne Patron, by Patron, 2:14 $\frac{1}{4}$. Merlo's grandam is the famous brood mare, Jeanne (dam of five trotters in the list, two producing daughters and one well known sire) by Kentucky Prince Merlo.

Missouri furnished most of the material at the recent International at Chicago. My Major Dare won the stallion class and also the class for stallion, mare or gelding. The Long stable also furnished other winners, Miss Loula Long winning first and second in the light harness classes with Expectation and Aspiration, as well as several valuable prizes in the heavy harness classes.

The number of horse-drawn vehicles in daily use in the downtown district of Chicago has increased by 30 per cent during the last two years. It is estimated that there are daily 130,000 teams on the central business streets of that city. Statistics gathered from eleven cities in various parts of the country show an average increase in licensed horse-drawn vehicles of 40.2 per cent per city in 1912 over 1910.

The subject of clipping the horse is a matter of considerable discussion at this time of the year. The following suggestions may be of benefit to those who are contemplating clipping their horses: In the first place, never clip a horse that has a fine coat of hair, as it will then be necessary to clip it every spring and fall thereafter. The only horses that should be clipped are those with heavy coats, that can be cared for during the winter, such as blanketing warmly in the stable and covering with a canvas sheet during severe storms while at work. The advantage in clipping a horse is that the long-haired horse, after sweating profusely, will not dry off during the night. This condition will cause the horse to take cold, the inflammation being located in the nose, throat, or lungs. It would not be a good policy to clip a horse and then turn it out to a straw pile for the winter. Clipped horses should never be allowed to stand uncovered, as they chill quickly. A clipped horse dries off readily, mud is easily removed from the legs, and there is no disagreeable hair flying during the period of shedding. In the fall clip as soon as the flies do not bite the animal, while in the spring, clip before the horse begins to shed.—C. H. Barnes, Colorado Agricultural College, Fort Collins, Colorado.

L. E. CLEMENT'S WEEKLY LETTER.

Editor RURAL WORLD: John Donovan, the proprietor of the King Hill Stock Farm, made an effort to buy Constantine, by Wilkes Boy, when he was a two-year-old. Mr. Conley, who was one of the owners, priced him at \$25,000. Mr. Donovan said, at that time, he could not handle a horse at that price. When the horse was seventeen years of age he came to King Hill Stock Farm, in 1904, and Mr. Donovan said he had wanted him fifteen years. At that time he had 13 trotters and 10 pacers in the list. In the nine years he has been at King Hill Farm he has added 59 standard performers, 9 of them in 1913. It is more than possible that he will live to the time when he shall pass the mark of 100 standard performers. Having the best son of Wilkes Boy living or dead and believing that the daughters of Baron Wilkes were the greatest brood mares on earth, it was seldom he saw one that she did not find a home at King Hill. At the dispersal sale last week Constantine passed to the ownership of Fred Emma and Frank Knell, proprietors of the Knell Stock Farm, and with him two of the daughters of Baron Wilkes, Baroness Hope, dam of Baroness Bingen, 2:25 $\frac{1}{4}$, a mare bred by Mr. Shultz of New York, and Alpha Wilkes, dam of Alpha Maid, 2:18 $\frac{1}{4}$, by Constantine, bred by R. G. Stoner, Paris, Ky.; both of these mares are in foal to Capt. Aubrey, 2:07 $\frac{1}{4}$, son of Peter the Great, 2:07 $\frac{1}{4}$, today the leading sire of 2:10 trotters, living or dead.

When Axtell was standing at \$1000, the same year, A. B. Darling bred Axworthy-Roxie Lee, 2:26 $\frac{1}{4}$ (a daughter of Old Nell by Hialoga, dam of 4 trotters and 4 of her daughters dams of 16 trotters), was sent by Walnut Grove Farm to Terre Haute, Ind., and bred to Axtell and got Axie Lee, 2:17 $\frac{1}{4}$, at Davenport, Iowa, Sept. 22, 1900. At Walnut Grove she produced Luzella, 2:30, by the farm sire Norcatur. After the death of Mr. Davis and the practical dispersal of Walnut Grove, Axie Lee, 2:17 $\frac{1}{4}$, passed to King Hill, and comes to the Knell farm in foal to Constantine.

Who will estimate the value of a daughter of Constantine out of such a mare as Axie Lee, 2:17 $\frac{1}{4}$, herself a producer, her dam with six in the list, and her grandam with four, although she was eleven years of age when she produced her first foal. No matter what the sex of the colts from the Baron Wilkes mares, they are sired by the second fastest son of Peter the Great, now owned in the United States or Canada, one that is breeding on, although he has no known cross of Clay blood, which Dr. McCoy contends is necessary, to a successful sire. The only one that surpasses him is Peter Volo (2), 2:04 $\frac{1}{4}$, and his dam is by the pacer Norvolo, 2:04 $\frac{1}{4}$, with no Clay cross nearer than the dam of George Wilkes (disputed) sire of Onward, 2:25 $\frac{1}{4}$, several removes through the male line, two remote to be of any great value to the daughters of Norvolo, 2:04 $\frac{1}{4}$, as producers. Dr. McCoy, if he has stopped to think a single minute, knows that if Don Chenault had been kept at Lexington, without a start at Columbus, or if he had been raced in several races before coming to Columbus, the acme of racing perfection he cites, Etterah would have had no chance in the world. The chestnut colt could out trot him at any time and all the time, but at Lexington he was sore, and after winning the first heat in record time, to save himself the second heat he went to pacing, and was distanced for

not performing, at the gait at which he was started.

Dr. McCoy says: "If such a thing happens as a successful family being founded by Peter the Great, it will be the only example of a family being founded through its male line which was not connected with the Clays. An interesting thing in connection with Peter the Great is that so far his great performers have all a Clay cross through the dam." His two fastest performers are Peter Volo (2), 2:04 $\frac{1}{4}$, with no Clay cross within four generations, and Lady Monitka, dam by Baron Wilkes, who has no Clay cross, unless we except the dam of George Wilkes as a Clay, next dam by Nutwood. It is building on a sandy foundation to say that Lady Manitko is on a Clay foundation. It is absolutely safe to say that Peter the Great gets his greatness from Pilot Jr. and the pacer Octoroon, and it is just as safe to say that the best results in breeding him has been on mares themselves pacers or having immediate ancestors that adopted the pacing habit of action, yet he has but 7 standard pacers to 114 standard trotters, a showing not made by any Hambletonian Clay horse (Electioneer alone excepted), unless like Axworthy, he had a pacing cross within two or three removes. Of Nutwood he says: "Belmont mated with Miss Russell, gave us Nutwood; this horse, with all the advantages of Kentucky and a millionaire owner, has failed to give us one live sire."

As sires the Knell Farm will have Zolock p., 2:05 $\frac{1}{4}$, with 37 in the list, by McKinney, sire of 177, by Alecyone, sire of 59 by George Wilkes; the Hambletonian-Clay start Constantine with 82, by Wilkes Boy, with 107 by George Wilkes, as above; Baron Will Tell, by Baron Wilkes, sire of 155 by George Wilkes as above. In brood mares Axie Lee by Axtell, Daughters of All McGregor (dam of Allercyone McGregor, 2:09 $\frac{1}{2}$, Queen of the Reapers, 2:22 $\frac{1}{4}$, McGregor Will Tell, 2:16 $\frac{1}{2}$, dam of Royal Reaper, 2:11 $\frac{1}{2}$, sire of Royal Hall (2), 2:19 $\frac{1}{4}$, race record for 1913 for two-year-old trotters on a half-mile track, by Kankakee and Dare Devil, 2:09 $\frac{1}{4}$, and daughters of Baron Wilkes, which the prospective foals of 1914 will be by Gen. Watts, Capt. Aubrey, Constantine and Baron Will Tell. Will it not be safe to keep your eye on this part of Missouri; that outside of the Knell farm is looking for foals in 1914 by Gen. Watts, R. Ambush, Sorrento Todd and other descendants of Bingen and McKinney?

NEW BORN COLTS.

The foaling season is at hand, and just to remind readers of the old saying, "an ounce of prevention is worth a pound of cure," a few words of advice concerning the care of the newly born colt may not be amiss.

One of the most frequent troubles, navel ill, or as it is sometimes called, joint ill, is an infection or poisoning of the navel.

This is caused by filth germs, which are harbored in all stables, but can be eliminated to a large extent by the free use of disinfectants and white-wash. The symptoms are a discharge and sometimes a swelling at the navel, one or more of the joints swell and are very painful. The swelling of the joints are usually attributed to the mare stepping on the colt, but that is the nature of the disease. It attacks the joints, they suppurate and break. There may be constipation or possibly scours, and great weakness.

To prevent these troubles, the mare should be stabled in a roomy box stall, where there is plenty of light. She should be well bedded with clean shavings or good clean straw. See to it that the dust has been shaken out

of the straw before using it. The stall should be freshly whitewashed and kept thoroughly clean. The bedding should not be allowed to become wet or soiled.

As soon as the foal arrives the navel cord should be tied with a string which has been soaked in a solution of carbolic acid (three teaspoonsful to the pint of water). The navel should also be bathed in a similar solution and the bathing repeated twice a day until it is healed.

Now just a word about the receptacle you have the water in. The slop pail will not do, neither will a milk pail be suitable, nor the wash dish. Use as clean a dish as you should want if it was yourself that was the patient. Don't use the water out of the tank, or the cistern. Use water from the well and boil it, letting it cool until it is the proper temperature. Then put it in a fruit jar that has been previously cleaned, and use for that purpose only. After bathing, if you have used a cloth, throw it away and get a new one for the next bathing.

If the colt is constipated give him two or four tablespoonsful of castor oil, according to his size and age. If he scours give him the oil just the same only a smaller dose. Injections may be used frequently, warm soapy water or warm sweet oil, or water and glycerine, equal parts. If water is used omit the soap after the first time.

As soon as the colt can take care of himself, both mare and foal should be turned to pasture, providing the weather is suitable. There is nothing better for both mare and colt than good grass and plenty of God's pure sunshine.—J. H. Crawford, V. S.

THE MERITS OF REDUCINE.

The Reducine Company of New York, whose advertisement appears in this issue, is one of the great business enterprises that has developed from a very modest beginning, upon a foundation of honorable transactions in every detail; a plan slow at first but when persistently adhered to as they have done survives and wins against the severest competition with standard trade articles and becomes a total eclipse in the field of pompous, pretentious and ambiguous claims of alleged remedies. Wherever you find a user of Reducine you encounter one of its most forceful boosters, not for the company's benefit, but from a friendly spirit and the personal pride of being first in putting a friend "next to a good thing." Continuous reports indicate that Reducine has yet but entered its great field of marvelous success.

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FARRIERY

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Everyone who owns a horse should have a copy of "Shoeing Horses," by R. Boylston Hall, who has been engaged in "balancing" the feet of horses for over 45 years. The author is now 74 years old and wishes to dispose of some 300 books at a price which will enable horse owners to buy without hesitation. The author wants to do some good in the way of increased comfort to the horse, and we have arranged to take the entire edition and send them to horse owners with a yearly subscription to COLMAN'S RURAL WORLD for \$1.25. Send in your order at once, as they won't last long.

Address COLMAN'S RURAL WORLD, 831 Holland Building, St. Louis, Mo.

Forest Grove, Oregon, March 15, 1913.
Mr. R. Boylston Hall,
40 State St., Room 43, Boston:

Dear Sir—I wish to apologize for not acknowledging receipt of your book on Horse Shoeing before. Your book arrived just as I was moving, and I didn't have time till a few days ago to read it. You certainly deserve full credit for your work and the congratulations of every horse owner. The easy and clear way you explain your principles makes it a book that everybody can read and understand, this alone being worth more than all the treatises written on that subject so far. Hoping that you are getting all the credit due to you, and again thanking you for remembering me, I am, yours very truly,
(Signed) C. P. McCAN.

CHARACTER IN HORSES.

That the best breeds of horses of the present day have characters as distinctly marked as that of their owners is a condition which we all must admit, and such is due in a great measure to the companionship with men. The word character, as here applied, refers to mental and moral qualifications, partly transmitted and partly acquired, which makes the horse the willing and efficient servant and the source of unmeasurable enjoyment to so many of us. In the state of domesticity and, of course, under the control of man, the horse has improved as a type and in point of usefulness, as man has advanced in point of civilization and education.

The main force lies in education, because inherited character may be modified and improved by education, and it is because this is so, that progress becomes possible. If selection and education were abandoned, the horse would rapidly revert to his original type, would deteriorate in size, in intelligence and in the possession of all those qualities which render him valuable to man.

Inheritance is a valuable basis for progress when individuals are judiciously selected, and it is only by this progressive selection, with proper crossing, that any degree of fixity can be stamped on the race.

Character in the horse is indicated, as in all the higher animals, by physical characteristics. Color and size are very untrustworthy indications of character. The general physical make-up—texture and fineness of skin and limbs, symmetry and finish—are good general guides to character, but above all other parts of the animal. Its shape, the position of the ear; and how much motion and expression of the eye, ear and muzzle unmistakably denote character to the eye of the practiced observer.

Close observers claim that a Roman nose in a horse, like the corresponding aquiline shape in man, generally indicates strong individuality, often accompanied with great intelligence. A straight facial line is quite as often found with a high degree of intelligence, but a dish-faced horse is rarely anything but a non-entity in character or a fool. There are of course a few exceptions to this rule, but they only prove it. A fine muzzle usually denotes a high nervous organization, while a coarse and large muzzle, with small and non-expansive nostrils and pendulous lower lip means stupidity. A sensitive and trim shaped nostril means courage and intelligence, even when as it does sometimes, also mean heaves. A broad and full forehead and length from eye to ear, are good general indications of intelligence, but the eye and the ear are the speaking features of a horse's face.

The eye of a horse is unquestionably the highest expression of animal intelligence. The ideal eye is of a liquid hazel, prominently set at right angles to the middle line of the face, large and bright, with delicate and sensitive lids, shaded with full and long lashes.

The ear, perhaps, adds more outward expressiveness to a horse's face than any other feature. It indicates a horse's state of mind more objectively. It is perfectly wonderful how the position and direction of a horse's ears can change the whole expression of the face. Curiosity, fear, anger, impatience—how clearly a horse shows these by the attitude of the ear; and how much more clearly some horses do than others. Where you know your horse he has a perfectly understood code of ear

signals. You instinctively watch his ears indicate intelligence as unmistakably as broad and movement everything that he is thinking of, for he does think, and think as intelligently relatively to his brain development as man does. The size of the ear, its quality, its texture and its setting are very important. Long and well shaped ears indicate intelligence as unmistakably as broad foreheads or aquiline facial line. Many people admire small and pointed ears carried closely at the tips. Although this may be the highest type of mere prettiness, many shrewd horsemen admire ears of generous length, widely placed and well carried, of fine texture and with distinct veining, well pointed at the tips and with great flexibility of individual movement.

The character wanted in the light harness horse of the present day involves intelligence and obedience.

First of all, a fine, sensitive and powerful physical organization is demanded, because perfection of physical adaption to the work to be done insures speed, safety and comfort. We want size enough to give the advantage of sufficient weight. We want solid or harmonious color, but above all we want a well balanced brain and indomitable will and courage. We want keen sense, a sensitive mouth, a sprightly and intelligent de-

meanor, obedience to the slightest word of command, cheerful willingness to stop, start or stand whenever directed, readiness to move at any desired rate without urging or without pulling, in a word the ability to do what a well-matured horse ought to do without compulsion and because of perfect sympathy with his master and confidence in himself.

Stallions that have character in the sense in which we have employed it are the horses to breed to if we wish to make the production of the intelligent as well as the fast horse more of a certainty than it is. But the dam exercises as much, if not more, influence in these respects as the sire, so that the first condition of progressive breeding along the lines indicated, is careful selection of dams. Then if we select the sire relatively to his possession of the qualities we desire to preserve and improve, we ought to be able to secure in the produce of such mating the inherited tendencies which careful and systematic education will develop to well rounded perfection.

Longview Farm, Lees Summit, Mo., R. A. Long, proprietor, has purchased from J. H. Murphy, McKinney, Ky., the 1-year colt Garrard Hunt 6127, by Garrard Chief 1835, dam Miss Hunt 3978.

HORSE VALUES INCREASING.

Horses are not being driven out of the markets by motor cars, as many persons believe. On the contrary, they are rapidly increasing in number and value.

Practically the entire development and use of motor cars has been in the last 10 years. Their use has been supplementary rather than a substitution for horses.

There were 16,531,000 horses in the United States in 1902, having a total value of \$968,935,000, or an average of \$58.61. In 1912, the census showed 20,509,000 horses, valued at \$2,172,694,000, or \$105.94 each. Three years ago there were 20,640,000 horses worth an average of \$95.64. Although in the last three years there has been a slight decrease in number, the value has steadily increased.

One hundred and three thousand horses, at an average price of \$97.53, were exported from the United States in 1902. In 1912, only 25,145 were exported, at an average of \$152.92. Imports, on the other hand, have increased, but the price has fallen off considerably. Horses numbering 4,832, averaging \$326.41, were brought into the United States in 1902, while in 1912 there were 9,593, averaging \$280.63 each.—E. W. M., in Kansas Industrial.



"My Boy, This Diploma Will Give You a Start in Life"

said a wise father to his son. "It will make you a prominent man in the Business World. In it you will have an asset which you cannot lose by

speculation—one which cannot be stolen or taken from you. Panics may come and go—fortunes may be made and lost in a single transaction—your fellow-men may conspire to cheat you out of your goods and chattels, but your legal education is with you forever. It is the one asset that you couldn't lose if you wished to, but it's an asset which you can convert into ready cash over and over again. I am now getting old. Ere long I may be called to that bourne from which no traveler ever returns, but I am happy to know that you are prepared to go out into the world and take your place among men and make good."

These remarks from a father to son are full of food for thought. That which this father has done for his son, you can do for yourself; or you can help do for your son, your brother, or the young man in whom you are interested. If you are an employer of men, encourage them to study law. It will come back to you a hundred times, in the increased efficiency of your employees. All you need is our help through our home-study law course and this you may have for a very small amount payable in small monthly sums.

You Receive Free Our Law Library!

With our Law Course, each student receives without additional cost, our complete Law Library, consisting of 14 volumes of American Law and Procedure. This Law Library is worth the entire cost of our course. It was written by over twenty of the deans and professors of law in the leading resident law schools and universities. It cost us nearly \$40,000, being more than the entire capital invested in many schools.

Which School? We realize that the question of selecting the right school is a hard one for you to settle in your own mind. It is especially hard in view of the fact that ordinarily you must decide on a school from its own statements of its merits. Unfortunately, the school that is not based on sound educational principles can write just as attractive an advertisement and can get up just as attractive a catalog as can the school that is conducted on sound educational principles. For this reason we are willing to assume all the risk by not asking you to begin paying for our course until you have seen it.

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Official Paper—
COLMAN'S RURAL WORLD.

Our Slogan: "Farmers Must Be Co-operators"

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THE EQUITY UNION, SELF-BINDER A FIFTY-YEAR REVIEW

Editor RURAL WORLD: I remember when I was five years old seeing my father cut wheat with a cradle. Then we had a reaper pulled by two horses, but a man raked off. I remember walking two miles when ten years old to see a reaper with a self-rake. For a number of years I bound wheat after a McCormick self-rake, which went over with a sweep as the reel revolved and raked off the enormous bundles of heavy Walker wheat in 1860 to 1870.

Then the Marsh Bros. gave us the Marsh harvester, which elevated the wheat over the side for two men to bind as they rode on the machine. After this idea was developed, it did not take long to replace the men with a wire binder, and finally a string or twine binder, and today, after fifty years, we have come up from the cradle as a harvesting machine to the modern Selfbinder which works almost to perfection, and enables us to harvest more than one hundred million acres of grain every year.

Progress was made slowly but surely, step by step. Many mistakes were made, but they were only used as stepping stones in the educational process. When we used the first reapers there were inventive dreamers who looked forward to the time when we would throw off the bundles of golden grain on the side, well bound by a selfbinder; but the pessimistic stand-patters said it was impossible—never had been done and never would be. But we are doing it, and people have ceased to wonder at the wonderful Selfbinder.

The Farmers' Problems.

As the inventors and manufacturers have wrestled with the problem of harvesting and threshing the immense crop of grain necessary to feed the one hundred million people of the United States, so the farmers, for 50 years, have struggled with the problem of uniting in a strong, fraternal national union that would enable them to present a solid front, a wall of defense, against the trusts and combinations which have grown up to exploit them on every side.

The Grange was very strong in Southern Illinois when I was a boy, but its ideas of co-operation were very crude. It disappeared with the wheat cradle and man-rake reaper.

The F. M. B. A. was two hundred thousand strong in 1890, and the alliance had nearly one million members and showed many improvements over former organizations. But these unions had not enough of the elements of true blue golden-rule co-operation to make them adhesive. Instead of developing these important principles among the farmers, they allowed politicians to creep in and break them up. These organizations were not a success, but educators. They were stepping stones to something better.

The American Society of Equity spread over a number of northern states very rapidly in 1902-1907, but it united any and all classes of people who would become subscribers to a certain newspaper and was a rope

of sand. The experience some of us received in the A. S. of E. was very beneficial in starting a new union and in building it up successfully.

Not a Branch.

The Farmers' Equity Union is not a branch of the defunct A. S. of E. It has no connection and never has had. But the founders of this growing Union, which has made a good start in ten states, are building on the foundation and failures of all past farmers' organizations of the last fifty years. We are profiting by fifty years' experience. We are cutting out the weaknesses and handicaps of the old unions.

We have only one head, a National Head. Instead of state unions, every state is represented on the national board of directors. There is no horde of county and state officers to absorb the revenue. Every dollar of revenue goes to some one who is showing results in building up the Union and educating the farmers to be golden-rule co-operators.

The Plan of Co-operation.

The Equity Union has a business plan of co-operation that unites the farmers and keeps them united. It enables them to run a safe, prosperous business that shows dollars and cents every year for its members. One farmer gave me a letter which he had received from an Equity Union member who had a taste of our co-operation. This is what he said:

"You ask me what I think of the Equity System. I think it the greatest system ever gotten up to unite the farmers—to make them co-operators—to return to the farmers the profits on their patronage—to unite the farmers so they can buy at wholesale prices, etc."

This farmer has "tried out" the Farmers' Equity Union in handling a very large wheat crop. If you ask him his opinion he will not give you a theory, but the facts. He will tell you that the Equity Union is no wheat cradle, man-rake, self-rake or dropper, but a genuine Self-Binder. It binds the farmers together as no other Union is doing or ever has done.

Send ten 2-cent stamps for the Equity Text Book which gives in full our plan of co-operation.

Greenville, Ill. C. O. DRAYTON.

VICE-PRESIDENT HOFFMAN'S AD- VICE TO A FRIEND.

Mott, N. D., Dec. 2, 1913.

T. C. Foster, Orleans, Neb.

Dear Sir—Your letter of the 15th ult. at hand. I most cheerfully reply on this subject, as it is a hobby with me, so some of my friends say. Co-operation is now in the air; everybody talks about it. But to get the principles of it so as to benefit one's self and others you must needs give the matter the attention it should have and apply these principles to every-day practice.

My earliest experience in co-operation dates back to 1864, when some German workmen came back from England, where they had learned of the Rochdale weavers the first rudiments in co-operation. In 1867 I came to the United States, where I soon

learned the workings of the Rabites, a sect leaving Germany as far back as 1848, and carried with them the principles of co-operation, although they then called it Communism. I have followed every movement in this country as far as I could inform myself of these efforts to better the conditions of life of the masses. I investigated a number of organizations, but none ever appealed to me as does the Farmers' Equity Union.

We have here at once an organization, though quite young, that will not only unite the farmers, but will hold them. You remember the Grangers. They progressed until they were led astray by wily politicians and failed. The American Society of Equity in the eastern states still prosper but our system is bound to overcome every obstacle.

Mott Equity Union is only a little over two years old, yet we have accomplished what was never known. Of course we were fortunate to have in our ranks men who never flinch, who have had experience in co-operation in Wisconsin, in South Dakota, in Indiana, Illinois and other states. They took hold of this proposition as presented by President Drayton, who came to Mott when we had a crop failure in 1910 and complete failure in 1911 in our section of the state, yet we took hold of the union idea and stuck. In the spring of 1912 the greatest task was getting seed grain, although with limited means we did the best we could. About a dozen of us went together and got a car of seed wheat that was the cause of keeping the price within the limits and the reach of the people who had to have seed. During the summer of 1912 we built the best elevator on any railroad west of the Missouri river, a 40,000 bushel house, at a cost of almost nine thousand dollars. The business people of the town said these farmers don't know what they are doing; they will fail in less than a year. Did they? I inclose for your inspection a list of how we pro-rated back the net earnings of every patron, over nine thousand dollars. We bought and sold during the season of 1912 and 1913, 242,766 bushels of wheat, 14,637 bushels of flax, 1,700 bushels of barley. The net profit on the season's business was, on wheat, barley, flax, coal, flour, feed, apples and twine, \$13,646.02; expenses of all kinds, \$4,431.32; net profit, \$9,164.70. Since the first of August this year we have bought a lumber yard which is bound to be a winner. Of course it takes lots of hard work, especially for the secretary, who has to take care of all the details.

Do not let anybody become a stockholder who will not take enough interest in your movement to first join it. Here it is where it is Union forever, first and last and all the way along. The Farmers' Equity Union is the mother society of every Equity Exchange. Look carefully to who your buyer is going to be; some folks call him manager. For example, last spring there was every indication that we of the northwest would be up against a famine of binder twine. Early in the game North Dakota, South Dakota and Minnesota were sold out; their entire output was engaged by March 15. Every effort on my part to get it was almost futile until I got a favorable answer from Wisconsin. Some exchanges have ignored my letters, others responded promptly and others paid a dollar a hundred more than we did. I bought 165,000 pounds, there were countermanded about 40,000. Some three thousand dollars' worth was left unsold. The Minnesota Twine Works cheerfully carries over our paper for a year without interest. Those who ignored the National Union paid a

cent a pound more than we did. I got the twine, first, by writing, then by inclosing a copy of the Equity Union Constitution and By-Laws, and told the management who we were. When a representative came here and saw our plants and our workings and looked over reports, the battle was over and the victory won.

Does it pay to belong to the Equity Union? Just try it. Two weeks ago our elevator had been buying better than 80 per cent of the grain marketed at this station; five other elevators decided to stop it. They just raised the price two cents a bushel. Did they get all the grain? Not hardly. We have so far this season on a half crop shipped to the last week in November 96 cars of wheat, and other grain in proportion.

Do we have trouble to get money? No. Last year the five directors signed up notes for twenty thousand dollars, but a month before the last note came due in the spring it was paid. The greatest difficulty we have encountered was in buying lumber, as we are not members of the Retail Lumber Association and rated in their trade journals. When I was pressed for a report, which came when I had no time to make it, I wired them ship draft attached to bill of lading, and we got a discount of 2 per cent. We get everything we go after. Don't look up to the clock when it comes to working overtime. I am writing this after 9 o'clock in the evening.

One thing you must bind upon your heart as it were, never let a bill get overdue; keep your secretary awake and always on the job. I have received letters before now: "We don't sell to such concerns as yours." Don't mind it; they will learn after a while. Stick to the Union and its friend, C. O. Drayton, and do as his wisdom suggests. Your friend,

L. F. HOFFMAN.

FOR FAIR ADJUSTMENT.

Editor RURAL WORLD: It has been said that a few men control the bulk of the money of the country. Now, if all producers would quit producing, of what good would the money be to its owners? Money is a medium of exchange as long as there is something to exchange it for. We have men and women who produce the farm products, the mine products also factory and mill products. There are those who haven't stopped to think but suppose money is more powerful than the producer. But if you will pause and think you can plainly see what a sad condition things would be in if all were money owners and non-producers. But we could get along fairly well if all were producers and no money at all. The producer from the mine is the man who gets the gold and silver to coin the money. After producing all the food, clothing fuel and machinery, and even the gold and silver, he is not very prudent if he doesn't take concern in how this wealth is distributed to himself and fellow producers. If he stops and lets his product go into the hands of non-producers with money he will find the non-producers will lose interest in production and become money greedy, for we all naturally buy as cheap as possible and sell as high as possible, which disheartens producer and hinders consumption.

We all know the real purpose of production should be for the consumer. Sometimes the producer is the consumer himself, that is, he consumes his own production, but if he produces more than he himself requires, it is his duty to get the over-production to the consumer in the most direct route. Non-producers have no moral right to hinder this

procedure. There are those who tell us that if the producer gives time to the distribution of his product it will distract his attention from production. And likewise, if non-producing middlemen give attention to production it will distract their attention from the best methods of distribution.

All classes of farm producers must, to gain their equity, have their own distributing managers, chosen by themselves; likewise with mine, factory and mill. We must as producers co-operate and choose our own managers. We are all consumers, and happy to say, the bulk of our nation are producers. It is to the consumer's interest that the producer have an equity price so producer can keep pace with consumption.

Would meat be scarce if the producers' price was as sure and steady as the packers' price? The packing trust are not likely to go to raising meats under these conditions. If the meat producers were getting the net profit that the packers are getting, we would have ample meat to go around without going to South America after any. It is cheaper in the long run, to pay a high price to producer rather than a low price to a long line of middlemen.

We suggest to the millions of consumers the Farmers' Equity Union plan—the true-blue golden-rule way of obtaining their food and clothing, and in turn we are obtaining as fast as possible produce needed on the farm in the same true-blue golden-rule way. We ask all consumers and producers to co-operate. Farmers must not forget the foundation lies in their own co-operation.

We advise all interested to read the Equity Text Book, obtained from Farmers' Equity Union, Greenville, Ill.

The farmer needs the consumer and the consumer needs the farmer. Let's co-operate. V. I. WIRT.

Virden, Ill.

AMERICAN PEACE POLICY.

What shall we say of the plans of the President and the Secretary of State for the promotion of International Peace? says David Starr Jordan.

We shall say that nothing more practical and effective has yet been suggested. There is no better means of bringing American influence to bear on the problems of the old world.

The end in view is to relegate war to a position of last resort in times of international difference, to place soldiers and dreadnaughts in the background—not in the front of national movement.

The essence of this American policy is that in case of friction between nations, the matter be placed for six months in the hands of a joint high Commission of Investigation, chosen in part from the contending nations, the majority from friendly neutrals. These for six months shall study the question at issue, neither nation in the meantime demonstrating, mobilizing or increasing its armament, until the final report is made. After this each nation is free to choose conciliation, concession, compromise, arbitration, or war. And with six months to think it over, there will be no war. Wars are waged for greed, for politics, or because the mob has been stirred by senseless speech or reckless journalism. And in many cases this reckless journalism has been carefully calculated and full paid for by those interested in the sale of the accessories of war.

The present decade has been characterized by needless, costly and brutal wars, the result not of actual conditions of today, but of blunders and crimes committed in the past. Wars do not spring up afresh in our civilization.

BUTCHERING AND MEAT CURING.

Editor RURAL WORLD: Well, hog killing time is here, but no hog killing weather. Some have killed their meat to save corn and have lost a part or all, owing, I think, in part to the damp heavy air. If the air is light and dry, even if pretty warm, meat will generally cool out if well spread out, and the salt well rubbed in. We always rub each piece thoroughly rolling and kneading the hams; the larger they are the more they need to be worked on, which opens up the pores and softens the meat and skin. Always rub the skin side till it becomes soft, and it will take in quite a little salt. For thirty years or more we have used a sugar cure we like very much. It gives the meat a flavor that you do not get by using plain salt. For every seven or eight quarts of salt use three pounds of brown sugar, one-fourth pound saltpeter, one pound black pepper. Dissolve saltpeter in a pint of hot water and pour over the salt, then mix the sugar and pepper thoroughly with the salt. About four or five days after the first salting go over it again. Leave hams and shoulders spread out so they do not touch. The pepper keeps away flies and bugs, and mice will not bother while meat is fresh. After three or four weeks we hang up and smoke lightly. After it is smoked a part is fried and put in jars and covered with lard. The rest, hams and shoulders are wrapped in paper and covered with ashes in a box or barrel.

We have a small smokehouse that is used for nothing else, and a place to store ashes. It is 6x8 feet, with foundation wall two feet high; floor and sides cemented smooth; a few boards laid across to walk on. Hooks are put in the plates and nail girts makes room for the meat from eight to ten hogs. The pit holds about twenty-five bushels of ashes, and makes a safe place to store them. Then if they are scattered around the fruit trees and grape vines will do much more good than if thrown in a heap at the back of the house. We cannot afford to throw away the ashes at the price we must pay for potash. W. A. STEVENS.

Garden City, Mo.

SWEET CLOVER.

Editor RURAL WORLD: Last spring we sowed a lot of sweet clover seed six years old. The soil had been in alfalfa and that crop plowed under and two crops of potatoes grown in one year had been taken from the soil previous to sowing oats and sweet clover. The season was extremely dry. The sweet clover came up with the oats to a perfect stand. It was at all times but little behind the oats in growth, and when the oats headed out and stopped growing, it overtopped them and, except at close view, hid them from sight. What a great pasture it would have made from September 20th to December. Today, December 10th, it is fairly good grazing. The fall has not been cold enough to kill it. That is my idea of grazing it, in the fall and in the spring. It is as much in need of inoculation as alfalfa.

The black, loose soil of a limestone hill washed down against a terrace on the farm until it was several feet deep, and the soil there is too rich for wheat, as it invariably fails. Neither alfalfa nor sweet clover can maintain a good color or any important growth under that condition without the nodule on the roots of the plants.

The state experiment station says: "Alfalfa in Middle Tennessee is a failure without the nodule, regardless of how it is manured." That is my experience with it and sweet clover. If that is true, it proves it has great difficulty in getting something, and if it is nitrogen, it proves it can do little to get it from any other source than the air. It can take it from neither soil nor manure. If that conclusion is wrong, fix it for me. I admit there is something ridiculous about it, but I believe it is in the premise and not the conclusion from it. The conclusion is out of harmony with the evidence nearly the world over. The premises are, too. It is all wrong. Here is the statement in another form from the Tennessee State Experiment Station: "You can't make the soil rich enough to supply nitrogen to alfalfa. No amount of nitrogen can take the place of the nodule." I believe that no amount of nitrogen can supplant the nodule, so I hunt the crab grass out of alfalfa with nitrate of soda in an effort to do it. I used all amounts nearly all summer. The soil in question that I used needed the nodule, it could not respond to nitrogen.

Ask the Boy Who Won

how he raised the Blue Ribbon ear.

In Boys' Clubs all over the country the prizes are going to the boy who uses the right fertilizer. That means enough

POTASH



to make a solid, well filled, and perfectly shaped ear.

Use 200 to 500 pounds Kainit per acre to balance either green or stable manure and be sure that the fertilizer you use contains 8 to 10 per cent Potash.

Ask your dealer to carry goods of that grade. If he doesn't we will sell you any amount of Potash, from one 200 lb. bag up, and you can add it yourself.

Don't forget this, for Potash Pays

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Editor RURAL WORLD: We have one fine Jersey cow fresh, and within the next few weeks will have another Jersey, three Holsteins and three shorthorns, and ten others later. The winter cows are the ones that make the big cream checks. Butter fat is bringing 29 cents at present and will probably be in the thirties before grass comes. We have one corner of the barn arranged with gates to make four pens to put cows in that we are expecting to freshen. Will let calves run with the cows till milk is good, then feed by hand. W. A. STEVENS.

ries and raspberries should be planted in the spring. Plant blackberries late in the fall or early in the spring.

JACOB FAITH.

Eldorado Springs, Mo.

VALLEY VIEW FARM NOTES.

Editor RURAL WORLD: We have one fine Jersey cow fresh, and within the next few weeks will have another Jersey, three Holsteins and three shorthorns, and ten others later. The winter cows are the ones that make the big cream checks. Butter fat is bringing 29 cents at present and will probably be in the thirties before grass comes. We have one corner of the barn arranged with gates to make four pens to put cows in that we are expecting to freshen. Will let calves run with the cows till milk is good, then feed by hand. W. A. STEVENS.

PURCHASE OF PURE-BRED HEREFORD HEIFERS.

The Animal Husbandry Department of the University of Illinois purchased two pure-bred Hereford heifers at the Hereford sale held at the International Live Stock Show in Chicago. The two heifers purchased are Dolly Real 393068 and Folly Bird 36765. They will be used in the University herd.

If chickens raised in a brooder are not rendered weak and tender by too much heat, and not enough ventilation, they grow rapidly and make early layers.

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References: Mr. C. O. Drayton, National President Farmers Equity Union For prices, freight rates and any desired information, write to us.

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WANTED—To hear from owner who has good farm for sale. Send description and price. Northwestern Business Agency, Minneapolis, Minn.

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FOR SALE—My home place, 320 acres, smooth land (not sandy), 7 miles from county seat and R. R. Six-room house and all necessary improvements. Silo. 260 acres cultivated, 240 in wheat. Daily mail, telephone. \$20.00 per acre, part cash. In the banner broom corn county in Kansas. Monroe Traver, Hugoton, Kansas.

FOR SALE—30 acres in Liberty County, Texas; 11 lots, Ashdown, Arkansas; 4 railroads; two 5-acre tracts and town lots at Bayside, Texas. Address RURAL WORLD Office, St. Louis, Mo.

FARM FOR SALE—Two hundred acre stock or dairy farm; three miles Frisco road; Webster County; price, \$5,000. Write owner for terms. Porter Smith Farm, Nangua, Mo.

LAND—I have an excellent half sec. timber land for sale cheap. Would make an ideal stock farm; good springs; near school and market. Easy terms. A. H. Owens, Pana, Illinois.

FOR SALE—70-acre, well drained American bottom farm, 40 miles from St. Louis, 3 miles from thriving town and railroad station. On county road, mail delivered, telephone. Crops, stock and implements if desired. \$1,500 cash, balance easy payments. Address H. S. RURAL WORLD.

ARKANSAS LAND FREE—500,000 acres vacant Government land now open to settlement. Booklet with lists, laws, etc., 25c. Township map of State, 25c additional. L. E. Moore, Little Rock, Ark.

SEED CORN.

PURE WHITE SEED CORN—Raised in 1912 in Seward Co., Kans. Prize winner of the Southwest. This corn is a strong germinator. Tests 90 to 95 per cent. I have selected and bred this strain of corn for 4 years. Have about 400 bushels shelled and graded. Will sack and fill orders as long as corn lasts. Price, \$2.50 per bushel. I. O. Sewell, Liberal, Kans. Route 2 and 73.

SEED CORN—Orders now taken for Boone County White, Johnson County White, Reid's Yellow Dent and Leaming seed corn, to be shipped later, on approval. Prices: \$2.50 per bu. shelled and graded, \$3.00 crated. Order early. Oaklawn Seed Farm, Chatham, Illinois.

CORN—1000 bushels pure bred high yielding seed corn. Dunlap, Williamsport, Ohio.

ORDERS now taken for Johnson County Seed Corn, to be shipped later. Prices: \$2.50 per bushel shelled, \$3.50 per bushel crated seed. The supply of seed corn will not half equal the demand. Order early. C. D. Lyon, R. 1, Georgetown, Ohio.

SEED CORN—Booking orders for pure-bred Boone County White seed corn of prize winning strains and high yields, properly selected, shelled, graded and sacked; \$2.50 per bushel. R. L. Hill, Adenhill, Columbia, Mo.

CLOVER SEED.

NEW WHITE SWEET CLOVER SEED—Also, leaf tobacco. J. T. Mardis, Falmouth, Ky.

HOGS.

POLAND CHINAS—Size and bone with quality; open spring gilts by Longfellow's Special 64200, \$20 to \$25 each; gilts bred to Ott's Big Orange 2d 68131, \$25 to \$35 each. Fall pigs by Longfellow's Special 64200, and Sensation Chief 67433, \$16, crated, in December. A. F. Siefker, Defiance, Mo.

HOGS—350 big type Mulefoot Hogs for sale. Dunlap, Williamsport, Ohio.

ADENHILL DUROCS—A splendid lot of spring and late summer boars and gilts sired by Beauty's Model Top, Col. Primus, G. C.'s Col. Orion M., out of sows of equal breeding and merit. These pigs are now on corn and cowpeas and tankage, making good growth, and are priced right, singly, in pairs or in trios. Booking orders now for fall pigs by My Col.'s Pilot Wonder, by Col.'s Pilot Wonder, the 1913 Ohio grand champion. R. L. Hill, Adenhill Farm, Columbia, Mo.

POULTRY.

GOLDEN BRONZE TURKEYS for exhibition and breeding. Fawn and White Indian Runners. Single Comb Brown Leghorns. Scored by Judge E. G. Teaney. Mrs. Edyth Riggerstaff, Enfield, Ill.

TOULOUSE GANDERS, \$3.00; Trio, \$7.50; large bodied; over standard weight. Good pens Single Comb Reds or Barred Rocks, \$7.50. Charles Stauder, Nokomis, Ill.

MAKE YOUR OWN POULTRY FOOD—Why pay 25 and 50 cents for a box of poultry food when we will show you how to make 50 pounds for the price of one box? One hundred pounds will cost you only a dollar or two to make. You can mix it in your poultry shed. Our food keeps your chickens strong and healthy. It makes your hens lay. Makes chicks grow. Formula and full directions for only one dollar. The Western Food Co., Box 474, San Francisco, Cal.

BARRED PLYMOUTH ROCK COCK-ERELS—\$2 each; a few by the Cock-erel I got from E. B. Thompson of New York, of his New York prize-winning Thompson Ringlet Strain, \$3 each; eggs in season. A. F. Siefker, Defiance, Mo.

NARRAGANSETT TURKEYS—First at State Fair; special prices this month. Mrs. J. H. Russell, Jr., Chilhowee, Mo.

FOR SALE—Rose Comb Brown Leg-horn stock; farm raised. Address, M. E. Hoskins, Flowler, Kansas.

INDIAN RUNNER DUCKS—American, English and White strains of prize-winning layers; mating list free. Marian Holt, Savannah, Mo.

LIVE STOCK.

FOR SALE—Ten choice registered bull calves for sale, from two to eleven months old, from high-class, heavy-producing Jerseys. Write me for prices, stating age you want. D. S. Mayhew, Monett, Mo.

HORSES.

BLANKS, for tabulating trotting pedigrees for sale. Let me tabulate your pedigrees and get our your folders. L. E. Clement, Peirce City, Mo.

TO EXCHANGE—Standard and registered stallions, mares and colts, for farming lands or other valuable real estate. Address Lock Box 515, Peirce City, Mo.

TO EXCHANGE

TO EXCHANGE—What have you of One Thousand Dollar value to exchange for an eighty-acre farm in Taney County, Mo., the boom section of the Ozarks? If you are interested, state what you have. Address P. O. Box 515, Peirce City, Mo. (tf)

MISCELLANEOUS.

WANTED—Butter, eggs, dressed chickens, applebutter, etc., shipped by parcels post, from country; cash with order. Address W. N. E., Rural World Office.

NUTS! Dandy Nut Cracker—paper weight—finest ever; unbreakable. Postpaid, 25c. Dandy Novelty Works, 4th St., Mendota, Ill.

BUCKWHEAT BY MAIL—Genuine bule-ground buckwheat flour. Send dollar bill. Full value in flour, less parcel post stamps. Guaranteed pure. Amaranth Farm, Amaranth, Penn.

NAMES WANTED—We pay immediately upon receipt of names. Send stamp for particulars. Address Box 54, St. Charles, Missouri.

"WILSON THE MAN." 20 cents will bring you this song. Janetta Knight, Gentry, Ark.

GENUINE DRY CLEANERS FORMULAS—The woman who desires to make money at home can easily do so with these formulas of a retired cleaner. Several ladies to whom I have furnished them are doing a fine business. One lady wrote me she would not sell the information for a great many dollars. Three separate formulas, with complete directions for dry cleaning chiffons, gloves, hats, cloaks, etc., \$1. Why pay cleaners high prices; do it yourself.—Mrs. W. M. Season, 127 Brady St., Kent, O.

"RATS AND MICE QUICKLY EXTERMINATED."

No cats, poisons or traps needed. Learn the secret and keep them away forever. Sure, yet perfectly harmless except to rodents. Secret originally cost \$100, but we will send it postpaid for only 25c.

The above advertisement has appeared in many magazines. I will send you the genuine recipe for this RAT AND MICE EXterminator (which I know to be O. K.) and 20 fine assorted postcards for 12c. This is a Bargain. Address Milton Boss, 4421 17th Ave., Rock Island, Illinois.

RURAL WORLD WANT ADS.

MISCELLANEOUS.

FARM PRINTING—We make a specialty of letter heads, envelopes, etc., for farmers and stockmen. Samples free. Prices reasonable. Frederick Printing & Stationery Co., 218 N. Third St., St. Louis, Mo.

FARMERS SUCCEED—Only when they use their heads as well as their hands. Have you noticed that, as a rule, those who work 9 hours a day MAKE MORE MONEY than those who work 18 hours? We have no machinery or seed, etc., to sell you, but—if you want to learn how to make "EVERY MOVE COUNT," send me your name now—TODAY. Milton Boss, 4421-17 Ave., Rock Island, Ill.

SPECIAL \$2.00 OFFER—We will print your return card on 1,000 No. 6 WHITE ENVELOPES and send them prepaid to any part of the U. S. for only \$2.00. We will print and send you 2,000 circulars, 125 words or less (with our non-conflicting ad on back) FREE with every order. Send copy for circulars and envelopes on separate sheets of paper, and make your copy very plain, so as to avoid mistakes. Remit by money order or registered mail. Make all orders payable to Milton Boss, 4421-17 Ave., Rock Island, Ill.

NEW 1913 EDITION.

Government Farms Free—Our 1913 official 132-page book, "Free Government Land," describes every acre in every county in the United States. It contains township and section plats, Maps, Tables and Charts showing inches rainfall annually, elevation above sea level by counties. The New Three-year Homestead Law approved June 6, 1912, the 320-acre Homestead, Desert, Timber and Stone, Coal, Pre-emption, Scrip, Mining and other government land laws. Tells how and where to get government lands without living on it. Application blanks, United States Patent. All about Government Irrigation Projects and map showing location of each. Real Estate Tax Laws of each state, area in square miles, capital and population and other valuable information. Price 50 cents, postpaid. Address Colman's Rural World. This valuable book will be sent with new or renewal subscription to Rural World for \$1.00.

SWEET CLOVER IN NORTH DAKOTA.

Editor RURAL WORLD: In reading the RURAL WORLD of Nov. 27 I noticed the inquiry of "Myron B." in regard to sweet clover in North Dakota. I live just across the Montana line in North Dakota in that great valley of the Yellowstone which I think will soon rank among the first sections of the country in an agricultural way.

Near the river in the wooded belt there is an abundance of sweet clover growing wild. We do not pay much attention to it as we raise alfalfa, which we consider more valuable here on our irrigated lands. I have suggested to a number of farmers on the bench lands that it is worth giving a trial. Our annual rainfall on the benches may not be sufficient for its needs, as we usually get about 17 inches.

I believe Mrs. Mardis is doing good in keeping this subject before the readers of the RURAL WORLD, as some will be convinced of its value. It has given her results and why not you under like conditions? As a farmer I think she can put to shame a good many men who are in the habit of undervaluing women's efforts, and I can see no logical reason why a woman like that should be denied the right to vote or any other privilege of citizenship. When she has the picture of her home taken I for one would like to have herself and family included. Don't you think it would be a nice feature of the paper to publish the pictures of homes? It would be very interesting if Mr. C. D. Lyon would contribute some pictures along with those excellent practical articles. I have just read what he said about the high cost of living. He makes it very clear why commodities are higher. We are at great expense in this western country for implements and horses; a good team is worth from \$400 to \$600 here and labor is out of reason. Farm hands get \$40 to \$50 per month, with board and lodging, and threshing hands get as much some seasons as \$4 per day and board.

Some of the labor agitators promise to make us pay still more next year. but I don't think farmers will be able to put up with such prices.

I have no land to sell, but for the

RHEUMATISM CURED KOHLBERG RHEUMATISM REMEDY

Guaranteed or money refunded.
KOHLBERG PHCY., Walton & Olive.
ELMER C. KOHLBERG, Sales Mgr.

benefit of some who have high-priced land in the Mississippi and Ohio valleys, I would suggest that you investigate the Yellowstone valley. Good fertile, level land, without stone and under irrigation, can be purchased as low as \$40 per acre, subject to irrigation charges. Land no better in the Upper Yellowstone valley sells for \$125 to \$300 per acre, according to location.

"Myron B." mentioned the healthfulness of our climate, which I will say will be hard to surpass even in California.

Has Mr. Lyon given up that expected trip to North Dakota? We would be much pleased to have him come and talk about corn and dairying, as very little of either is found here. We would be very glad if he could also tell us how to prevent hog cholera. We are now passing through an experience of it.

Here is an easy remedy for bloat in cattle, caused by eating alfalfa: Place a large-sized rope in the cow's mouth and then pour cold water over the back where bloated.

C. H. WELLS.

McKenzie Co., N. D.

Virginia Farms and Homes

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(No Oil) If you have Gallstone Pains or Aches in Stomach, Back, Side or Shoulders; Liver Trouble, Stomach Misery, Dyspepsia, Colic, Gas, Biliary-neuritis, Headaches, Constipation, Piles, Catarrh, Nervousness, Blues, Jaundice, Appendicitis, Yellow, Sallow, Itchy Skin or Bad Color. Send today for our Liver-Gall Book for Stomach Sufferers. **FREE**

Gallstone Remedy Co., Dept. 760, 219 S. Dearborn St., Chicago

GALL STONE

Pains, Stomach and Liver Distress, Quick Relief. No operation, oil or tablets. 12 year's success. Read the following:

In July, 1912, Mrs. Somers sent us this letter:

Snow Hill, N. C., July 28, 1912.
Please send me circulars for Gall Stone treatment. I have been troubled with them for three years. Yours truly, Mrs. H. T. Somers.

Nine months after using one two-dollar package of COLETHA she writes to an inquiring friend, as follows:

Snow Hill, N. C., April 17, 1913.
Dear Friend: I will answer your letter of inquiry and I am pleased to do so. I think COLETHA will do all they claim for it.

I know it has cured me of Gall Stones. I suffered three years and the doctors did me no good. I tried three of them, and each one of them said I would have to go through an operation.

Then I saw Coletha advertised, and decided to try it, and I did. And I am well now. I did not take but one two dollar package. I think it is the best medicine in the world for Gall Stones.

You said you would keep my letter a secret. I am willing for you to publish it if it will be the cause of any one getting cured of Gall Stones, and I know Coletha will surely cure them without an operation. Truly yours in friendship, Mrs. H. T. Somers, Snow Hill, N. C.

Remedy \$1.00. Circulars Free.
COLETHA CO., ST. LOUIS, MO.

Thousands Die of Colds!

Famular's Cold Chasers

The best remedy for La Grippe, Coughs, Colds, Neuralgia, Catarrh or Bronchitis. They work directly on the liver and lower bowels, thereby arousing the secretions to action and are, therefore, very effective in cases of Indigestion, also Headache. Approved by prominent physicians. 50c per box; special trial size 25c. Have them handy at home. Promptly mailed on receipt of price. BRANDS-FAMULAR CO., 458-2 Communipaw Ave., Jersey City, N. J.

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